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ABSTRACT

Designed for use in a self-paced, open-entry/open-exit vocational training program in clothing services and machine repair, this curriculum guide is one of six for teachers of adult women offenders from a correctional institution. Module topic outlines presented on fourteen topics: fashion, characteristics of fibers and fabrics, custom dressmaking, threading power sewing machines, using power machines, cleaning and oiling power sewing machines, adjusting machine stitching, tailoring techniques, pattern drafting, a custom sewing business, merchandising jobs in clothing services; constructing and installing window treatments, window treatment jobs, and the client's home. For each topical area the concept, performance objectives, generalizations, occupational competencies, suggested learning activities, and criterion-referenced measures are listed. The training plan outlined suggests time periods for each topic within a six-month program. A job description and career ladder are included. Five prototype individualized learning packages for student use are appended. (The final report of the project to develop and field test the six guides is CE 017 808). (Author/JH)

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CLOTHING SERVICES AND MACHINE REPAIR HELPER

Era Looney

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U S DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
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CE 017 810

Division of Vocational and Technical Education
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FOREWORD

The curriculum guide for this course was planned for training as a clothing services aide and machine repair helper. The Clothing Services and Machine Repair Helper curriculum outline was planned to be used by an instructor in connection with students' learning packages. Student materials were not developed for every module topic. The only student materials included are those five learning packages which were pilot tested. The five learning packages which are included should serve as an example for instructors to follow in developing further student materials to fully implement the instructor's module topic outline. The titles of the individualized learning packages which follow are: Fibers and Fabrics, Using Power Machines, Adjusting Machine Stitching, Pattern Design and Drafting, and Establishing a Custom Sewing Business. Upon successful completion of the course, the trainee will receive a Certificate of Achievement for Clothing Services Aide signed by the instructor for the course.

Within the module topic outlines, related references with page numbers are given in order as each teaching-learning strategy is presented. A complete bibliography is given at the end of the guide.

The "Instructional Objectives" listed for each module topic specify trainee performance to be demonstrated upon completion of instruction. In the Module Topic Outline under "Criterion-Referenced Measures" are listed performance guides relating to each objective. The occupation "Competencies" listed in the Module Topic Outline for instructors refer to competencies the graduate of the training program would be able to perform on the job. The assumption is that trainees will be able to perform the listed competencies in an actual work setting if they can demonstrate satisfactory achievement of instructional objectives on the basis of criterion-referenced performance evaluation.

Occupational competencies are derived from V-TECS catalog task analyses whenever possible. All V-TECS references for Clothing Services and Machine Repair Helper may be found in A Catalog of Performance Objectives, Criterion-Referenced Measures and Performance Guides for Alterationist and A Catalog of Performance Objectives, Criterion-Referenced Measures and Performance Guides for Home Furnishings Worker. The instructor may find these sources helpful in providing additional information for instructional purposes.

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INTRODUCTION

Many employment opportunities are available for individuals trained in clothing services. Employment may be secured in clothing merchandising establishments, dry cleaning establishments, and industrial clothing factories. Additionally, an individual may become self-employed in a home-based custom sewing business.

Sewing machine repair helpers work on machines in the production areas and also in the repair shop of the sewing department of an industrial establishment. Repairpersons are in demand and wages are excellent.

The modules included in the Clothing Services training course cover procedures to prepare an individual to work in a variety of settings, including a home-based business and as repairpersons in the sewing department of an industrial establishment.

Additional training in machine repair is designed to train trainees to assist in repair and adjusting sewing machines in sewing departments of industrial establishments, using hand tools. A typical job description for Clothing Services and Machine Repair Helper is presented on page 3.

Each module which follows serves as a guide for instruction and includes the module title, behavioral objective, suggested time (minimal) for the section, occupational competencies,criterion-referenced measures, teaching-learning strategies, references, and materials needed for instruction. Only major references are cited for use in teaching the modules, but instructors are encouraged to include other references in their classes (see References).

Upon completion of all the training program requirements, the trainee would receive a certificate of achievement similar to that presented on page 9. Such a certificate would be useful to the graduate when contacting a potential employer.

PROFESSIONAL NOMENCLATURE

Competency - One of the distinct major activities involved in the work performed on the job in a given occupational role.

Criterion-referenced measure - An exercise based upon an instructional objective, the accomplishment of which measures attainment of that objective.

Curriculum guide - A set of occupational training materials to be used for a course, including modules containing instructor and student resources.

Instructional objective - A statement in precise, measurable terms of a particular behavior to be exhibited by a trainee under specified conditions in a classroom or laboratory setting.

Instructor - Teacher/work supervisor who facilitates instruction using this curriculum guide in a group or individualized setting.

Module - A unit of instruction within a curriculum guide containing module topic outlines for the instructor and materials for use with students (i.e., individualized learning packages, programmed instruction, or group lesson plans). A module is a separate, self-contained, and non-sequential unit to be used singly or in combination with other modules.

Task analysis - A process of reviewing actual job content and context in business and industry for application to the development of instructional objectives, criterion-referenced measures, and quality control within a program of vocational-technical education. V-TECS catalogs are derived from such a task analysis.

Trainees - Students who would receive instruction in an occupational training program based on this curriculum guide.

JOB DESCRIPTION[1]

The Clothing Services Aide works under direct supervision in such establishments as clothing merchandising, dry cleaning, industrial clothing, and private homes. Specifically, the clothing services aide makes, alters, and repairs garments according to a pattern or customer specifications, using a sewing machine or by hand. Drafts patterns. Measures, constructs, and installs window treatments. Constructs drapes. Analyzes fashion trends.

The Sewing Machine Repair Helper assists the sewing machine repairperson in repairing household and industrial sewing machines. Specifically, the repair helper lifts machines to work bench and disassembles parts, using wrenches and screwdrivers. Cleans parts, using solvent and wiping rags. Replaces defective parts and reassembles machines. Starts and observes machines in operation to test their performance, and oils machines if necessary. Uncrates and assembles new machines.

---

[1] U.S. Department of Labor, Dictionary of Occupational Titles (Washington: Government Printing Office, 1965), pp. 13, 634, 648, 695.

CAREER LADDER IN

Clothing Alteration, Retail Store

Level	Dot. No.	Existing Titles	Proposed Titles
Top			
	*	Alteration specialist	Department manager
Professional/ Managerial			
Step	785.281	Alteration tailor, Tailor Apprentice, Alteration	Alteration assistant
Step	785.381	Seamstress, women's garment alterations	Alteration assistant
		Men's garment fitter	
		Women's garment fitter	
Assistant			
Step #1	299.887	Stock girl	
Entry			

Lattice possibilities: self employment as dressmaker, design, clothing sales; with children's wear experience could move into children's home, etc.

CLOTHING AND TEXTILES: Clothing Alteration*

Work Description	Minimum Qualifications
Supervises staff of seamstresses. Handles personnel matters. Confers with buyers or department heads on consumer complaints...	Formal education and/or work experience in field.
Alters clothing to fit individual customers or repairs defective garments, following alteration or repair tags or marks on garments.	Highly skilled and knowledgeable about tailoring techniques. May have risen through business or industrial experience or formal education.
Makes, alters, repairs garments... according to pattern or customer specifications, using sewing machine or by hand sewing...	Highly skilled in fitting and alterations, mending. May have risen through business, industry, or home sewing.
Fits men's ready-to-wear garments on customer...	Requires experience or training in fitting.
Fits women's ready-to-wear garments...	Requires experience or training in fitting.
Refolds garments, or places them on hangers. May sew on missing and loose buttons, hooks, and loops. May account for garments tried on by customers.	Must be observant, have initiative and hand-sewing ability.

---

*American Home Economics Association, Career Ladders and Lattices in Home Economics and Related Areas: Possibilities for Upgrading Household Employment (Washington: American Home Economics Association, 1971), pp. 54-55.

CAREER LADDER IN

Clothing Design and Construction

Level	Dot. No.	Existing Titles	Proposed Titles
Top	142.081	Clothes Designer	
Step	*	Designer-Dressmaker	
Professional/ Managerial			
Step	786.261	Master Tailor	
Step	152.288	Copyist	
Step	785.361	Dressmaker	
Technician/ Assistant			
Step	785.381	Seamstress	
Entry			

CLOTHING AND TEXTILES: Clothing Design and Construction

Work Description	Minimum Qualifications
Creates designs and prepares patterns for new types and styles of men's, women's, chileren's wearing apparel... Roughly sketches pattern... Writes specifications describing construction, color scheme and types of fabric to be used. Examines experimental garment on model...Shows new styles...at shows and sales...	Creative ability, ability to sketch, drape, stage fashion show. Thorough understanding of textiles and clothing construction.
Performs all duties of clothes Designer and Dressmaker. Manages own business.	Same qualifications as for designer. Business ability.
Designs and makes tailored garments such as suits, topcoats, overcoats, and other dress clothing, applying principles of design, construction, and styling. May supervise other workers in tailoring shop.	Skill in tailoring, styling, and fitting.
Gathers information on current trends in garment styling and sketches examples on competitor's garments, such as dresses, coats, and trousers... Sketches garments to illustrate such details as garment style and type of fabric. May design original garments, incorporating features of observed garments.	Ability to judge trends, sketch, copy observed garments.
Makes women's garments, such as dresses, coats and suits, according to the customer's specifications and measurements...Discusses with customer type of material, pattern or style to be used...May draft pattern...May make garment according to picture furnished by customer.	Skill in garment construction, pattern and style selection. Ability to alter or draft patterns.
Alters ready-to-wear as instructed...sews to fit customer measurements...	

CLOTHING SERVICES AND MACHINE REPAIR HELPER TRAINING PROGRAM

Suggested Time - 6 months

Topic	Approximate Time
Fashion	1 week
Custom Dressmaking	4 weeks
Tailoring Techniques	6 weeks
Characteristics of Fibers and Fabrics	1 week
Threading Power Sewing Machines	1 week
Using Power Machines	1 week
Cleaning and Oiling Power Sewing Machines	2 days
Adjusting Machine Stitching	3 days
Pattern Drafting	2 weeks
A Custom Sewing Business	2 weeks
Merchandising Jobs in Clothing Services	1 week
Constructing and Installing Window Treatments	3 weeks
Window Treatment Jobs	2 days
The Client's Home	3 days

CERTIFICATE OF ACHIEVEMENT

CLOTHING SERVICES AND MACHINE REPAIR HELPER

THIS IS TO CERTIFY THAT ______________________________

HAS SATISFACTORILY COMPLETED THE TRAINING PROGRAM

FOR CLOTHING SERVICES AND MACHINE REPAIR HELPER.

SIGNED ________________________
INSTRUCTOR

DATE ________________________

List of Terms

Color scheme - colors used in designing a garment or a wardrobe.

Color wheel - a circle of color samples used to show main colors.

Crosswise grain - the filling yarns running the width of the fabric from one selvage to the other.

Dart - a tuck, tapered to a point at one or both ends; used to fit clothing over the curved areas of the body.

Design - the arrangement of parts, details, forms, and colors to produce something new.

Fabric - woven, knitted, or felt fibers (cloth, material).

Fashion - the currently popular style of dress.

Fiber - a single thread-like strand.

Filament - a strand of man-made fiber, such as nylon.

Finish - the treatment of a fabric surface to add a desirable feature; adds waterproofing, crease resistance, etc.

Grainline - the direction in which yarns or threads are woven in a piece of fabric.

Interfacing - an additional piece of fabric between a garment and its facing to give added strength, shape, or stiffening, and to prevent stretching and sagging.

Layout - the arrangement of pattern pieces on fabric for cutting.

Lengthwise grain - the yarns or threads of a fabric that run the length of the fabric parallel with the selvage edges.

Machine lockstitch - the lockstitch is identified as a class of stitches formed with two or more groups of threads and has for a general characteristic, the interlacing of the two groups. Loops of the first group are passed through the material where they are secured by the thread or threads of the second group to form a stitch.

Man-made - synthetic yarns or thread made from nylon, polyester, etc.

Nap - a fuzzy or hairy surface of fabrics such as velvet or fur.

Natural - animal or vegetable yarns or thread which come from silk or cotton, wool, flax, etc.

Notch - a small V-shaped nick cut in seam of garment to show where pieces fit together for stitching.

Pile - weave of a fabric having fuzzy surface threads such as corduroy or velvet.

Plain weave - crosswise yarns pass successively over and under each lengthwise yarn, alternating (changing) with each row; the most common weave in fabrics.

Seam - the line formed by sewing together sections of a garment or the edges of pieces of fabric.

Seam allowance - the extra fabric allowed beyond the stitched seam line.

Selvage (selvedge) - the narrow, tightly woven edge or border along the lengthwise edge of woven fabric.

Stay stitch - a line of regular machine stitching through a single thickness of fabric, applied 1/8 inch toward garment from the seam line; used to prevent stretching on curved or bias edges.

Tension - the tightness or looseness of the upper and lower threads on the sewing machine.

Thread - very fine fibers twisted together.

Weaving - process of forming a fabric on a loom by interlacing the lengthwise and the crosswise yarns with each other.

Yarn - product formed by twisting natural fibers or synthetic filaments together to form a continuous strand which can be used for weaving or knitting.

Pre- and Post-Tests*

Clothing Services

1. List three (3) natural fibers and four (4) manmade fibers.

Natural	Manmade
1.	1.
2.	2.
3.	3.
	4.

2. List one common problem with thread, a common problem with cloth and a common problem with needles which can make machine stitching puckered and/or uneven. In each case write an adjustment you would make to correct the problem.

With thread...

With cloth...

With needles...

3. List three different types of power sewing machines according to functions they perform.

1.
2.
3.

4. List three benefits of knowing the flat pattern method of pattern drafting.

1.

2.

3.

---

*This instrument was used by research project personnel in pilot-testing the indicated portions of the material with trainees.

5. List one advantage and one disadvantage of having your own business.

   One advantage...

   One disadvantage...

6. Why are there many different specialized machines for factory sewing rather than one machine for all functions like the home sewing machines?

7. Name a part on a power machine that is not present on a home machine.

8. Why are custom sewing and alteration services in such high demand today?

9. Using a sloper and brown paper, make one (1) adjustment of your choice in the dart location.

Directions: Place letter by the one best answer in the blank to the left.

________ 10. A filament is a
   (a) long continuous strand of synthetic fiber
   (b) a type of thread used for topstitching
   (c) a treatment applied to fabric to add desirable feature
   (d) two or more yarns twisted together

Pre- and Post-Test Key

1.

Natural	Manmade
1. wool	1. acetate
2. silk	2. polyester
3. cotton	3. nylon
	4. rayon

2. With thread: breaking and missed stitching; check tension.
   With cloth: Bulkiness is different in fabrics such as silk and cotton; check pressure regulator
   With needles: thread size; change needle size according to fabric.

3. (Any three)
   blindstitch power machine
   buttonhole " "
   button machine " "
   lockstitch power machine
   overlock or serger power machine

4. 1. May use more than one pattern in combination to make an original design.
   2. May adjust/alter pattern to fit.
   3. May make a pattern to reproduce a design you've seen.

5. One advantage: To help make good money, since customers are willing to pay well for this service.

   One disadvantage: To keep the customer satisfied at all times (may require much effort at times!)

6. To make work faster--increase production--without making machine adjustments.

7. Threader mechanism for machine needle.

8. Because of its value in quality and durability compared to inexpensive readymades.

9. (Trainee moves darts on brown-paper sloper properly, making one adjustment of own choice.)

10. a

Module Topic: Fashion

Generalization: *Dress provides a means of self-adornment and self-expression in addition to physical protection. Dress reflects current cultural mores. Clothing customs are passed down through generations. The rate of change in clothing customs is related to the rate of change in culture. Clothing may be a means through which the components of art are illustrated.**

Instructional Objectives:

1. Given a list of terms, correctly match the terms to the provided descriptions relating to the use of each term in the fashion world.
2. Given books on fashion history and current fashion catalogs and magazines, summarize orally one reason for change in fashion and prepare a poster illustrating a current fashion derived from a style of the past.
3. Given fashion catalogs and magazines for cutting, make notebooks of labeled pictures illustrating the use of at least five basic lines which are used in dress design.
4. Given pictures of garments, group them into artistically pleasing combinations for a color-coordinated wardrobe.

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*Adapted from American Home Economics Association, Concepts and Generalizations: Their Place in High School Home Economics Curriculum Development (Washington: American Home Economics Association, 1967), pp. 38, 40.

Competencies	Criterion-Referenced Measures
1. Acquire terminology used in the fashion world.	1. Matching of terms and their descriptions related to the fashion world.
2. Analyze fashion trends.	1. Accuracy and appeal of posters illustrating fashion trends, as rated by members of the class. Selected examples will be used in constructing a bulletin board on fashion trends.
3. Analyze effects of line in dress upon appearance of the figure.	1. Illustrations in notebooks and accuracy in labeling line effects.
4. Identify appealing color schemes based on color theory. Use color theory in wardrobe planning.	1. Individual notebooks illustrating coordinated wardrobes which utilize principles of color theory.

Teaching-Learning Strategies	References	Materials, Media, & Other Resources
- Assign related reading	Instructor-prepared information sheet	
- Trainees prepare posters and bulletin board		magazines, poster-board, letters for bulletin board
- Have trainees draw basic lines and collect pattern catalog or magazine illustrations which depict each basic line in apparel design		pattern catalogs, fashion magazines
- Have trainees collect pattern catalog or magazine illustrations to compile basic wardrobes based on two different color schemes	Color wheel	pattern catalogs, fashion magazines

Module Topic: Characteristics of Fibers and Fabrics[+]

Generalization: *Knowledge of fabric terminology facilitates understanding and communication. Fabrics are products of fiber and/or yarn, fabric construction, and finish. Each fiber has physical and chemical properties which affect its performance in a fabric. Fibers may be modified both chemically and physically to produce desirable characteristics for specific end uses. Finishes may be applied to fabrics to produce and control desired qualities. Certain fabric conditions (i.e., raveling, napped surface, design to be matched, fabric design off-grain), require special consideration, treatment, and care for satisfactory garment construction.**

Instructional Objectives:

1. Given a list of terms and definitions, the trainee will accurately discuss in class terminology that is identified with the manufacture of fabrics.
2. Given written information and actual fabric swatches, the trainee will label swatches according to fiber(s) present and/or type of weave or finish.
3. Given examples of garment hang tags, identify common fabric finishes and any special construction techniques required by each.
4. For a variety of fabrics, employ construction techniques suitable for special fabrics (i.e., velvet, corduroy, pile, twist knits, twills, and plaids).
5. Given a display of sewing thread, match each to written descriptions according to size and ply of thread, twist and finish of thread, composition and uses of thread.

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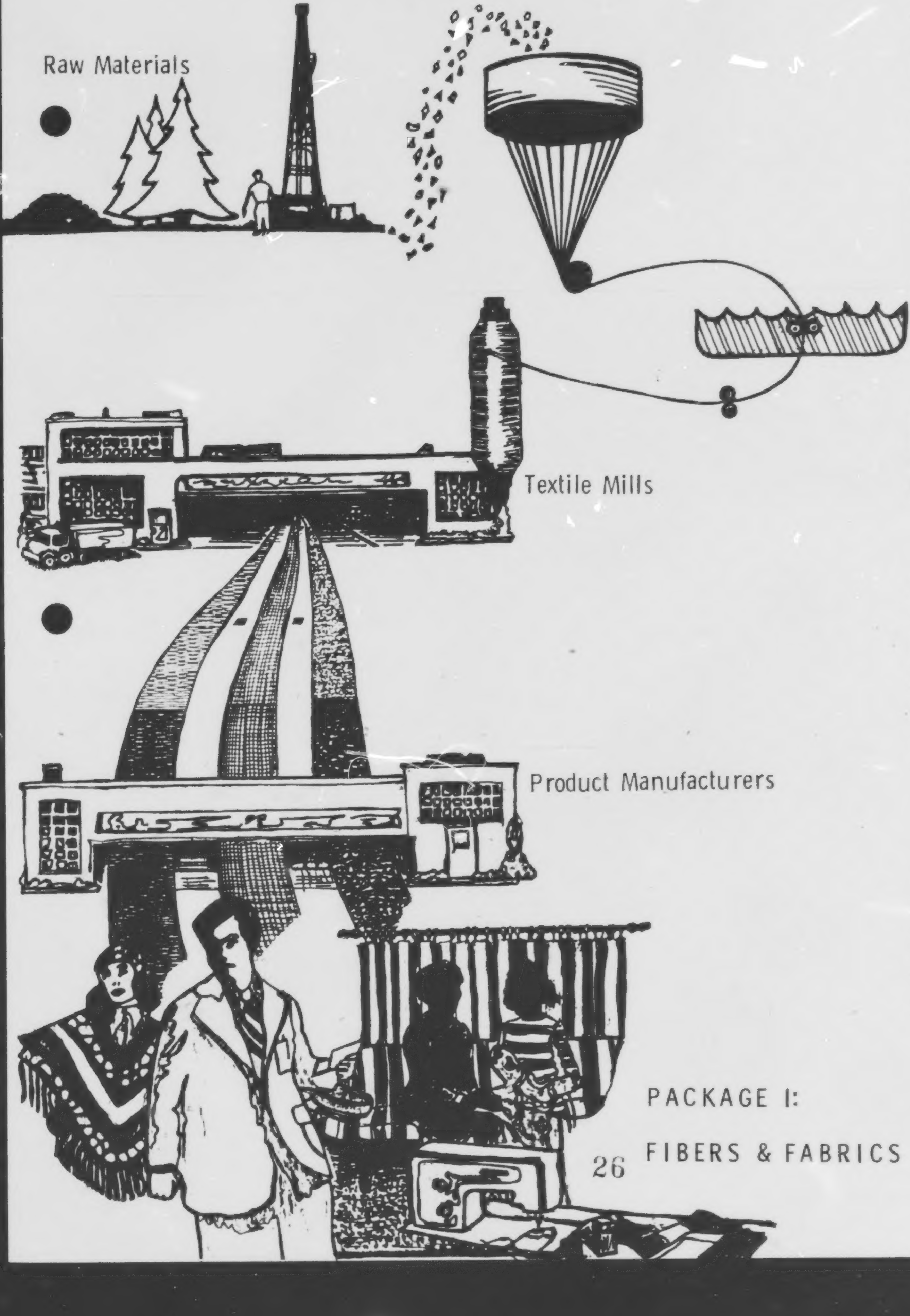
*Adapted from American Home Economics Association, Concepts and Generalizations: Their Place in High School Home Economics Curriculum Development (Washington: American Home Economics Association, 1967), p. 41.

[+] This material was pilot tested by research project personnel.

Competencies	Criterion-Referenced Measures
1. Distinguish characteristics of fabrics according to fibers, yarns, weaves, and finishes.	1. Small group presentations of the ways fibers, yarns, weaves and finishes influence the properties of selected man-made and natural fabric swatches. A checklist is to be prepared after a study of provided references concerning types of fibers, yarns, weaves, and finishes, for use in rating the accuracy of content of each presentation. (See Self-Check I, "How Fibers, Yarns and Finishes Affect Fabrics", App. A, p. A-8.)
2. Identify types of fibers and weaves and examples of fabrics using each.	
3. Relate characteristics of fabrics to problems in power sewing.	1. Construction of garments or samples which employ techniques suitable for special fabrics and fabric finishes. (See Self-Check II, "Problems in Sewing Special Fabrics", App. A, p. A-10.)
4. Employ appropriate construction techniques for fabrics and fabric finishes requiring special handling.	

Teaching-Learning Strategies	References	Materials, Media, & Other Resources
- Assign related readings.	State Cooperative Extension bulletins	
- Divide trainees into four groups to study and present information on fibers, yarns, weaves, and finishes.	Goodman, Apparel Design and Production, pp. 24-26	
- Instructor demonstration and discussion, using selected swatches of fabrics.		fabric swatches
- Display and label samples of sewing thread of varying size and ply, twist and finish, and composition and uses.		samples of thread

CLOTHING SERVICES


Raw Materials
Textile Mills
Product Manufacturers

PACKAGE I:
FIBERS & FABRICS

FIBERS AND FABRICS

INTRODUCTION	When you sew garments, you will have better results if you know something about the fabrics you are using. Problems with your sewing could happen because you do not know what special handling is needed for a certain piece of material. Fabrics differ a great deal depending upon the fibers, yarns, and finishes used in making the fabric. Over the years, changes have been made in fabrics. Many more kinds are made for sale as people's needs and preferences change constantly, and the cloth manufacturers try to satisfy them. In this package you will learn the types of fibers, yarns, weaves, and finishes used in making cloth.
DIRECTIONS	Read the four lesson goals below. If you think you can do these assignments now, read the Check-Out Activities on the last page. Then, either arrange with your instructor about doing the Check-Out Activities, or If you need to complete the lessons in order to be able to do the assignments below, find the three LESSONS inside this booklet and go through them in the order in which they are listed.
GOALS	(1) Given a list of terms and definitions, the trainee will accurately discuss in class terminology that is identified with the manufacture of fabrics. (2) Given written information and actual fabric swatches, the trainee will label swatches according to fiber(s) present and/or type of weave or finish. (3) Given a variety of fabrics, the trainee will employ construction techniques suitable for special fabrics (i.e. velvet, corduroy, pile, twist knits, twills, and plaids). (4) Given a display of sewing thread, the trainee will match each to written descriptions according to size and ply of thread, twist and finish of thread, composition and uses of thread.

LEARNING ACTIVITIES

1 ▶ READ Information Sheet I, HOW DO FIBERS, YARNS, AND FINISHES AFFECT FABRICS?, and the provided bulletins on fibers and fabrics and present information to the class.

2 ✓ TEST YOUR KNOWLEDGE of fibers and fabrics by writing a checklist and completing Self-Check I, HOW FIBERS, YARNS, AND FINISHES AFFECT FABRIC.

3 ▶ VIEW a demonstration by your instructor of common problems in sewing certain fabrics.

4 ✓ TEST YOUR KNOWLEDGE of problems in sewing certain fabrics by completing Self-Check II, PROBLEMS IN SEWING SPECIAL FABRICS.

5 ▶ VIEW a display of different sewing threads.

6 ▶ READ Information Sheet II, THREAD TERMS, GRADES AND SIZES.

7 ✓ TEST YOUR KNOWLEDGE by labeling examples of sewing thread to complete Self-Check III, CHARACTERISTICS OF SEWING THREAD.

8 ✗ ARRANGE with your instructor to complete this booklet by going through the Check-Out Activities listed on the back page.

Lesson I

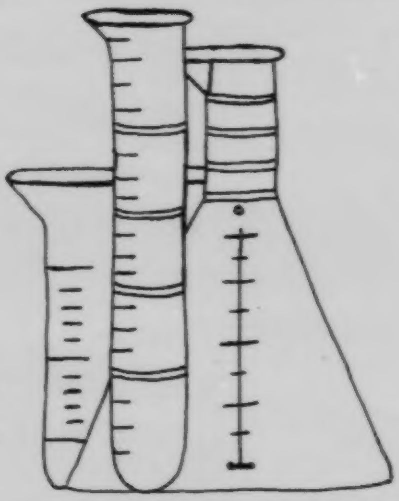
Information Sheet I

HOW DO FIBERS, YARNS, AND FINISHES AFFECT FABRICS?

Fibers

Fibers are hair-like strands from which all yarns are made. Those which come from nature are called natural fibers. Fibers which are made by man from chemicals are called synthetic or man-made fibers.

All natural fibers, except silk, are short in length and must be twisted together to make yarn. Synthetic fibers are made in long, continuous strands called filaments. They can be grouped together with very little twist to make yarns.



Acrylic

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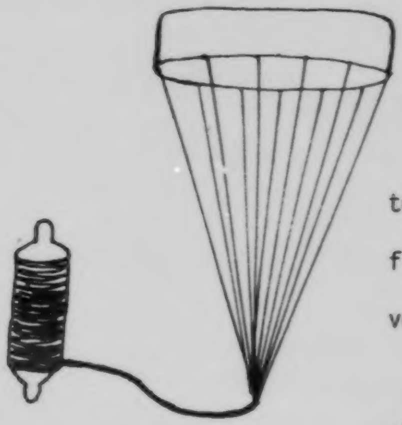
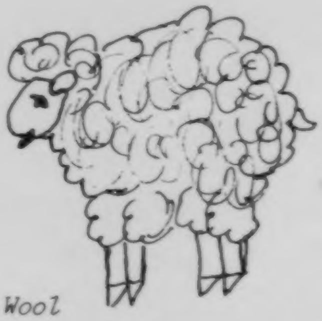


Synthetic

For thousands of years the only fibers available to make cloth were found in nature. Today, natural fibers are still used, such as wool. Cotton fiber is very popular for making into denim fabric.

Synthetic or man-made fibers are made from chemicals obtained from coal, air, water, sulphur, and natural gas.* Like the natural fibers, synthetics have both advantages and disadvantages. Blending together two or more different fibers can overcome disadvantages to make a very nice piece of fabric.



Wool

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*Man-made raw materials began to find their place in fabric production around 1891. In 1938 nylon was produced from chemicals to give man his first true synthetic fiber.

Yarns

When you look at a piece of fabric, notice the individual yarns from which it is made. As described earlier, yarn is made from fibers twisted together.

> NOTE: Take a small ball of cotton and pull some of the fibers loose. Fibers are small and fine. If you twist some of the loose fibers together, they will hold together and stretch out to form a yarn.

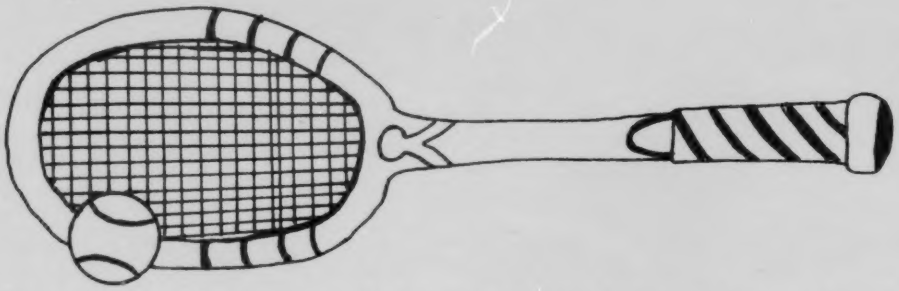
When two or more yarns are twisted together, they make a ply yarn which is stronger than the single yarn. Blends of two or more kinds of fibers are made by twisting different fibers into a single yarn.

A wrinkle-resistant synthetic fiber like polyester can be blended half-and-half with cotton, a natural fiber that is absorbent and cool. The finished fabric has the advantages of both fibers. It is cool to wear and wrinkle-resistant to look nice all day.

To understand what each fiber can be expected to do in a fabric blend, study the fiber characteristics in the bulletins you will receive.

Weaves

Weaving is the mixing of threads to make fabric. Fabric is made on a loom by interlacing threads at right angles to one another. Look at a tennis racket for the design of a basic weave.



Long ago, people had to weave their own fabric before they could sew clothes. Today, machines weave most fabrics by automatic methods.

Several different types of fabric weaves are used. A fabric may be made using a certain type of weave to give the cloth a more interesting appearance.

Some fabric weaves are stronger than others and produce longer-lasting cloth.

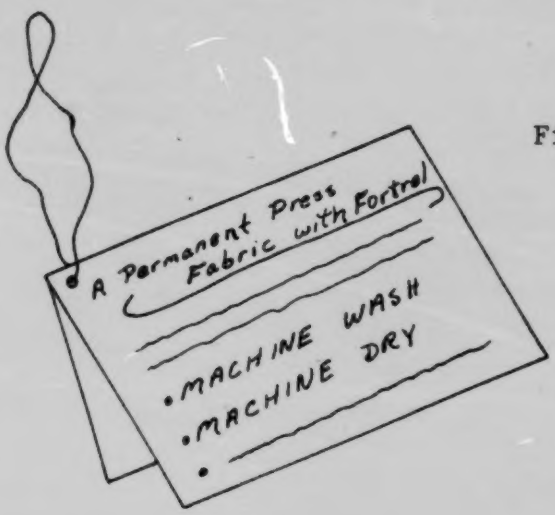
Most of the fabrics we use are made using a plain weave. The threads are interlaced so that each lenthwise thread goes over one crosswise thread and under the next crosswise thread. A fabric made with a plain weave is muslin. Many bed sheets are made from muslin.

A twill weave is another type. Fabric made with a twill weave has the effect of slight diagonal ridges which show on top of the fabric. The twill weave is produced by each crosswise thread going over at least two lengthwise thread and then under one or more lengthwise thread. Strong fabrics, such as denim for jeans, may be made using a twill weave.

You may find the satin weave has been used to make your evening dress or the lining in your coat. This weave resembles the twill weave. The threads are even more widely spaced in satin weaves. The crosswise threads "float" over the lengthwise threads. The floating threads produce the shiny or satiny effect. You may snag the widely spaced floating threads. This makes fabrics of satin weave less durable.

Still another weave used to make fabric is called pile. Fabrics which are examples of the pile weave are velvet and terrycloth. In the pile weave threads form loops on the surface of the cloth. For terrycloth the loops are not cut. To give a velvety appearance each loop may be cut and fuzzed.

Many popular fabrics are knitted rather than woven. In knitting one or more threads or yarns are looped together by hand or machine. Loops may run crosswise or lengthwise in a knitted fabric. Many interesting fabrics are formed by knitting. Different types of knits are tricot for underwear and double knits.


A Permanent Press Fabric with Fortrel
•MACHINE WASH
•MACHINE DRY
•

Finishes

Many kinds of finishes may be applied to fabrics before they are ready to be sold. In sewing garments, special finishes which may affect how you handle the fabric include luster finishes and permanent press. Care labels are attached to fabric you buy in a retail fabric store and to garments for sale in a ready-to-wear store. These labels give laundering and care instructions for this type of fabric. Study the bulletins and samples of labels you receive for more information about all the kinds of finishes.

EFFECTS OF FIBERS, YARNS, WEAVES, AND FINISHES ON FABRIC

The finishes, fibers, weaves, and yarns used will affect the piece of finished cloth. The use of different finishes, fibers, and yarns will result in pieces of fabric that look and feel very different.

Each of the different types of fabrics will present a new set of problems for the sewing machine operator and the mechanic. They may have different feeding characteristics, sewing characteristics, gather differently, or just handle in a different manner. It will be to the advantage of the machanic to become familiar with the different kinds of fabric used in the plant. This can be done most effectively by actually handling or using the material until the general characteristics are familiar.

Small Group Experience

Choose two or three other persons in the class and select one of these topics:

1. Fibers
2. Yarns
3. Fabric Finishes
4. Fabric Weaves

First, the members of your small group will study the provided pamphlets and charts for information about the topic you chose.

Second, your group is to prepare a checklist for scoring the presentation to the class of the information on your topic. (See p. 13.)

Third, each group will give a 5-minutepresentation on their chosen topic.

EQUIPMENT AND SUPPLIES

Cotton balls
Clothing labels

REFERENCES

State Cooperative Extension Pamphlets of fabrics.

✓ Self-Check I

HOW FIBERS, YARNS, AND FINISHES AFFECT FABRIC

With other members of your group, prepare a checklist to score your class presentation on fabrics, yarns, fabric finishes, or fabric weaves. After you have finished, compare the categories on your checklist with the ones at the bottom of the page. If they do not agree, go through the Information Sheet again and redo your checklist accordingly. If you are not sure, check with your instructor first.

Answers:

I. Fibers
  A. Natural
    1. Cotton
    2. Wool
    3. Flax or Linen
    4. Silk
  B. Man-made
    1. Polyester
    2. Nylon
    3. Rayon
    4. Acrylic
    5. Mineral (fiber glass)
    6. Olefin

II. Yarns
  A. Staple fiber yarns
  B. Filament yarns
  C. S and Z twist yarns
  D. Ply yarns
  E. Novelty yarns

III. Finishes
  A. Scotchguard
  B. Permanent press
  C. Sanforized
  D. Colorfast
  E. Fire resistant
  F. Mothproof

IV. Weaves
  A. Types
    1. Plain
    2. Twill
    3. Satin
    4. Basket
    5. Jacquard
    6. Pile
  B. Knits
  C. Other nonwoven
    1. Felt
    2. Vinyl

▶ Lesson II

PROBLEMS IN SEWING SPECIAL FABRICS

Instructor Demonstration

Your instructor will perform a demonstration for the class at the sewing machine to show you how certain fabrics cause problems in machine sewing.

REFERENCE

"Sewing Today's Fabrics." New York: Coats & Clark, Inc., n.d.

✓ Self-Check II

PROBLEMS IN SEWING SPECIAL FABRICS

Your instructor will display numbered swatches of fabrics. Write the letter of each swatch in the blank to the left of the description it matches in the list below.

____ 1. In "pile" form, this fabric is bulky to handle. It requires extra patience for cutting and marking pattern guidelines. Follow the "with nap" yardage requirements and layout, and use extra long pins. Check stitch length as the thickness of the pile may cause a shortening of the stitches. Machine buttonholes are not recommended. Finish garment hem with a facing.

____ 2. When knitted in tricot jersey form, this fabric requires certain techniques. Cut off pattern margins (not seam allowances) for more accurate cutting. Use polyester thread and a ballpoint machine needle for stitching. Hold fabric in front and back of presser foot and gently stretch as you stitch. Loosen tension and use more pressure on presser foot. Don't backstitch seam endings.

____ 3. In a sweaterknit form, this fabric requires some special techniques. Cut off pattern margins for more accurate cutting. Use polyester thread and a No. 10 ballpoint needle. Make a doublestitched seam or use stretch or overlock stitch to prevent rolling. Make machine buttonholes in the same direction as the ribs of the knit.

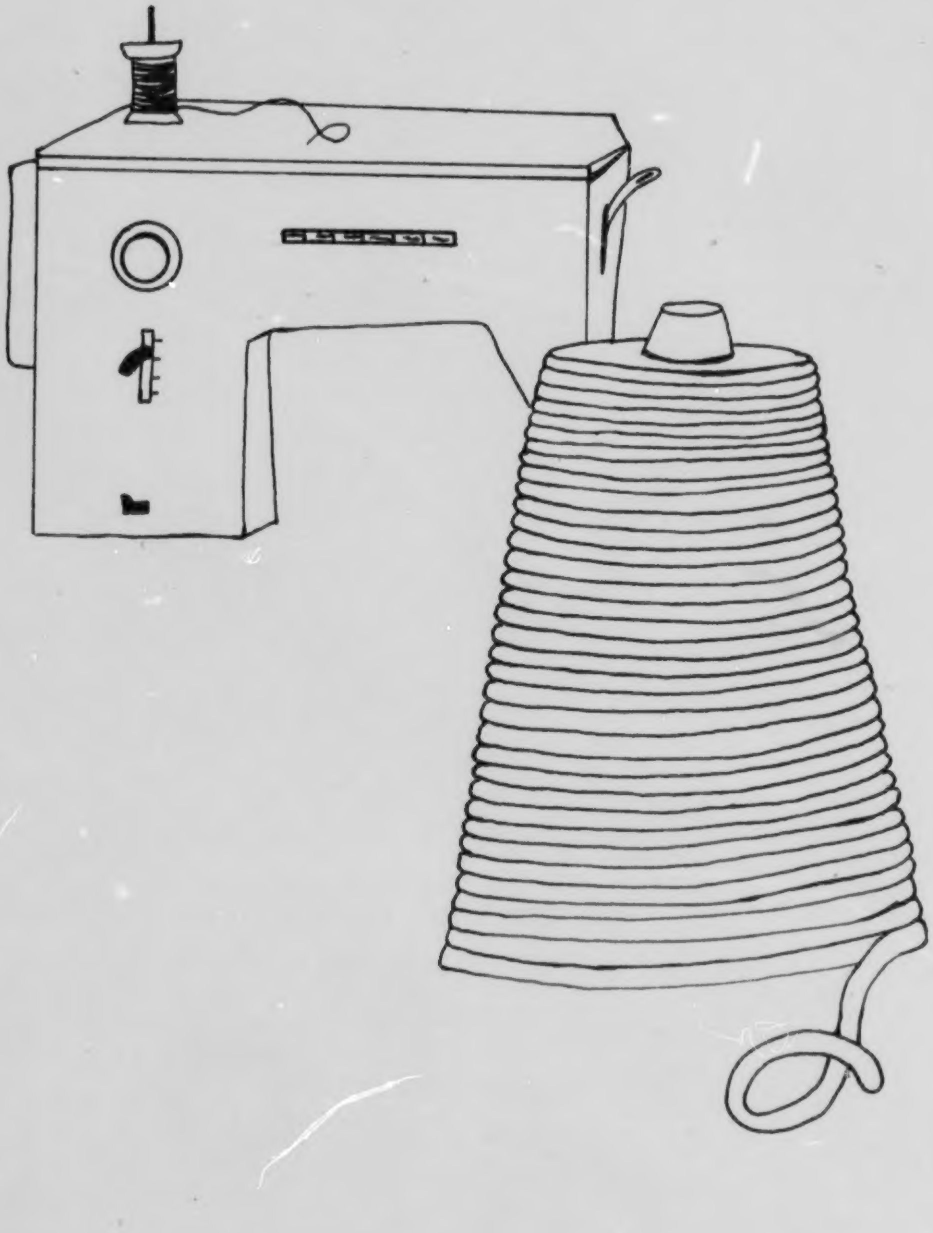
Answers: 1. Modacrylic
2. Nylon
3. Acrylic

Lesson III

CHARACTERISTICS OF SEWING THREAD

▶ Display

Your instructor will prepare a display of a wide selection of sewing threads and explain the uses of each.



Information Sheet II

THREAD TERMS, GRADES AND SIZES

Yarn and thread are usually classified as being man-made, which include the synthetic yarns or thread made from nylon or polyester, or natural, which include either animal or vegetable fibers. Animal and vegetable fibers come from such things as silk or cotton.

Yarn may be described as being continuous strands of fibers that are lightly twisted or spun to make a continuous string of material. Thread is made by taking several yarns and twisting them together to produce a string of material that will give sufficient strength for sewing.

Corespun thread is made by spinning a cotton wrapping around a synthetic polyester core. It combines the strength of synthetics with the heat resistant, high-speed sewability of cotton. Threads are constructed from a number of yarns held together by twist. The amount and direction of twist given to a thread has an important bearing on strength, balance, and elasticity, which in turn affect the thread's sewability. Because of this, the amount and direction of twist must be carefully controlled during manufacturing to obtain maximum sewing performance.

Twist directions can be either left hand, "Z," or right hand, "S." "Z" twist, sometimes referred to as ordinary twist, is used most frequently in thread construction, while "S" or reverse twist is usually required only for certain specialized operations such as flatback sewing. The type of needle thread twist selected is normally determined by the direction the looper or hook is travelling as its point enters the needle loop. Ideally, a twist should be selected which tends to move the needle loop toward the point of the hook or the looper.

The twisting process is the final step in the basic construction of sewing threads. At this point the thread is commonly referred to as "grey." The "grey" thread usually goes through one or more additional processes depending on the type of finish required, such as mercerizing.

Threads may be mercerized, which means that they are treated with a chemical to give shine, strength, and ability to absorb colored dyes. Mercerizing cotton threads increases the tensile strength 20% to 60%; increases ability to absorb dyes; and makes the thread firmer and improves aging.

Special problems that may be encountered in the use of threads will be those concerning the synthetic threads and the finishes applied to these threads. Some threads will overheat and leave a gum-like substance on the needle. Most of the time this will be caused by selecting the wrong size of the needle for the particular thread being used. Sometimes, thread lubricants must be used to keep stitching properly. A good general knowledge of threads, thread grades, thread sizes and thread properties will be very beneficial to the sewing operators and mechanics.

Factors of thread sewability often determine maximum machine output, which in turn influences the total manufacturing cost of making clothing. If a poor selection of thread is made for a particular sewing assignment, time is wasted in readjusting the machine. Selection of the proper thread for good sewability requires choosing a type which meets the needs of the particular sewing assignment. Selection must be based on a good working knowledge of all the thread types currently being sold.

Yarn Numbering

In order to fully appreciate thread construction, an understanding of yarn counting or numbering systems is required. These systems fall into three distinct classes: cotton, denier, and Tex systems.

1. In the cotton system, thickness of yarn is indicated by its "count" which is expressed as the number of hanks of a given length in a fixed weight. Coarse yarns have low count numbers, while finer yarns have high count numbers. The count is the number of 840-yard hanks in one pound. For example, a 20's count would measure 20 x 840, or 16,800 yards per pound.

2. The fineness of a synthetic yarn is indicated by its denier, determined by the weight of a fixed length of the yarn and based on the weight in grams of 9,000 meters. If, for example, a given length weighs 100 grams per 9,000 meters, it is said to be of 100 denier. This system of yarn counting is the denier system.

3. The Tex system is comparable to the denier system but based on the weight in grams of 1000 meters of yarn. Although not commonly used in the trade, it is becoming more popular.

Diagnosing Sewing Problems

The first step in diagnosing any sewing problem is to determine exactly when it began. Were there any changes in materials, threads, machines, suppliers, product design, colors, or new personnel that might affect the situation?

You may wish to use the following procedure to determine the source of a sewing problem:

- Is the proper thread for the operation being used?
- Does the thread hang up on the cone?
- Is the thread stiff and wiry?
- Is there excessive fraying, lint, or fusing?
- Does the thread appear to have a rough, abrasive finish? Does it pull through the machine's tensions unevenly or with a jerking motion?

- Tension. Is the proper thread tension being used? Always use the least amount to balance the stitch.

- Are there indications that the thread has too much stretch or permanent elongation that affects forming the needle loop?

Adapted from Larry Crisler's "Thread: Careful Selection of This Low Cost Staple Can Decrease Production Problems," The Needle's Eye, No. 271, February-March, 1976, 32-35.

NEEDLE/THREAD SELECTION GUIDE

Needle Size	Fabrics	Thread
9-11	Lightweight fabrics--thin cottons, voile, silk, muslin, Qiana, cotton knits, tricots, jerseys, crepes, woven polyester, shirt & blouse fabrics.	Light duty thread in cotton, nylon or polyester.
12	Medium weight fabrics--cotton, satin, kettlecloth, sailcloth, double knits, lightweight woolens.	Most threads sold are medium size and suitable for these fabrics and needle sizes. Use polyester threads on synthetic materials and cotton on natural woven fabrics for best results. Always use the same thread on top and bottom.
14	Medium weight fabrics--cotton duck, woolens, heavier knits, terrycloth, denims.	
16	Heavyweight fabrics--canvas, woolens, outdoor tent and quilted fabrics, denims, upholstery material (light to medium).	
18	Heavy woolens, overcoat fabrics, upholstery fabrics, some leathers and vinyls.	Heavy duty thread, carpet thread. (Use heavy presser foot pressure.)

√ Self-Check III

CHARACTERISTICS OF SEWING THREAD

Your instructor will display numbered samples of sewing threads. Write the numbers of each thread in the blank to the left of the description it matches in the list below. (Some numbers may be used more than once.)

____ 1. No. 50 mercerized cotton thread

____ 2. No. 60 combination cotton-polyester thread

____ 3. Nylon monofilament thread

____ 4. Buttonhole twist

____ 5. Used for thread markings (tailor's tacks)

____ 6. Used for knits

____ 7. Commonly used in industrial sewing for invisible machine stitching

____ 8. Used for attaching buttons, top stitching, and making thread loops

NOTE: Your instructor has written the answers on the back of the numbered labels attached to each spool or cone of thread.

✓ CHECK-OUT ACTIVITIES

The statements below explain the activities you must be able to complete in order to finish this booklet. After you complete the activities, your instructor will rate your performance.

> Your instructor will provide a display of numbered fabric swatches with a brief written description attached to each. List the numbers of the swatches on a sheet of notebook paper and write the name of each sample of fabric to the right of its number.
>
> Your instructor will provide a list of ten terms and definitions relating to the manufacture of fabrics. Match each term to its definition by writing its number in the blank to the left of the definition.

Fabrics Quiz

Directions: Match the following definitions with the correct term, by placing the letter in the blank to the left of each definition.

____ 1. hair-like strands from which all yarns are made

____ 2. two or more yarns twisted together

____ 3. formed by fibers twisted together

____ 4. a treatment applied to fabric to add desirable features

____ 5. made wholly from chemicals

____ 6. obtained from nature; may be either animal or vegetable

____ 7. two or more different kinds of fibers twisted together into a single yarn

____ 8. permanent instructions for laundering which are sewed onto ready-to-wear clothing

____ 9. a long continuous strand

____10. a type of thread used for topstitching a garment

a. blend

b. buttonhole twist

c. care label

d. fabric finish

e. fiber

f. filament

g. natural fiber

h. ply

i. synthetic

j. yarn

Answers: 1. e
2. h
3. j
4. d
5. i
6. g
7. a
8. c
9. f
10. b

Module Topic: Custom Dressmaking

Generalization: *Knowledge of the various materials and tools available for the construction task, coupled with skill in their use, contributes to ease of construction and satisfaction with the completed garment. Knowledge and use of machine nomenclature improves communication. Choice of seams and seam finishes depends upon the type of garment, location of the seams, and characteristics of the fabric. The selection and use of a commercial pattern involves compatibility of the design and fabric with the individual and the intended use of the garment plus the manipulative and construction skills of the seamstress. Accurate interpretation and use of information on the pattern envelope forms the basis for decisions regarding yardage and notions. Choice of layout depends upon pattern size, variation of pattern design desired, dimensions of fabric, and design or naps. Fabric grain can be stabilized by preparation for cutting and by stitching, pressing, and handling correctly. Choice of pressing equipment and pressing techniques are influenced by grain of fabric, type of fiber, shape of the garment, location of the part to be pressed, and finish of the fabric. Use of the planned sequence for construction provided in the pattern guide sheet increases self-confidence and promotes self-direction. When permanence is desired in hand stitching, durability and attractiveness are increased by making the stitches secure, yet inconspicuous. Learning to evaluate one's own sewing can contribute to increased skill in clothing construction.*

Instructional Objectives:

1. Given items of sewing equipment, correctly demonstrate their use in garment construction.
2. Given a diagram of a sewing machine head, label machine parts and match each part with its written description.
3. Given a performance test, correctly thread a sewing machine and wind bobbin; then, stitch two seams of varying widths in paired fabric swatches or construct a square pin cushion. Apply a seam finish appropriate to the fabric.
4. Given a tape measure, correctly record an individual's measurements, select pattern of suitable size, and alter pattern if necessary to achieve perfect fit.
5. Given fabric and a pattern, straighten fabric grain and ends and use correct layout diagram to fold fabric and pin pattern to fabric.
6. Given supplies for marking pattern details, cut out fabric pieces and mark them accurately.
7. Given garments in process of construction in a variety of fabrics, use correct levels of temperature and moisture for each to press form and shape into garments.
8. Given professional pressing tools (i.e., press board and cushions), use them to achieve a finished look in constructing a garment.
9. Given garment pieces, employ the following construction techniques: stay stitch in direction of grain; use appropriate stitch length adjustments; back-stitch ends of seams; follow indicated stitching lines; understitch garment facings; at right angles pin garment edges, adjusting ease, before stitching.
10. Given a variety of garment fasteners (i.e., snaps, hooks-and-eyes, buttons, zippers), sew each to garment (or work sample) to insure a neat appearance and ease of fastening.
11. Given an unhemmed garment, mark an evenly measured hem, press, and inconspicuously stitch hem and/or alter hem to improve evenness of length.
12. Given a variety of garment trims, attach them evenly and securely to garments or work samples.

Competencies	Criterion-Referenced Measures
1. Use sewing equipment as aids to management of clothing construction.	1. Performance tests of using sewing equipment on work samples.
2. Demonstrate correct procedures for operating a sewing machine.	1. Rating construction of seam samples or square pin cushions on a prepared scorecard.
3. Prepare fabric and use pattern for cutting and marking details on garment pieces.	1. Garment pieces which are accurately cut and marked following a pattern.
4. Fit patterns to individual figure types and sizes.	1. Accuracy of measurement records, pattern size selection, and performance of necessary alterations to achieve perfect fit.
5. Use professional pressing techniques in constructing a garment to achieve a finished look.	1. Checking progress of garment construction on points such as the following: - Press every seam before sewing another seam across it. - Press in "units" to speed work. - Use pressing tools, temperature, and moisture to press form and shape into garments.
6. Use correct techniques in stitching a garment.	1. Examination of seams in completed garment for use of accurate techniques of stitching.
7. Sew fasteners to garments to ensure a neat appearance and ease of fastening.	1. Evaluation of each fastener for neat appearance, ease of fastening, and secure attachment.
8. Prepare and stitch an inconspicuous garment hemline.	1. Examination of hem for evenness and inconspicuous stitching.
9. Attach trims to garments to enhance their appearance.	1. Examination of attachment of trims to garments to check that they are secure and even.

Score Card for Garments

Name______________________________

Evaluate each item using suggested point value for scoring: (4) Excellent, (3) Good, (2) Average, (1) Poor.

Workmanship	1	2	3	4	Comments
1. Fabric					
a. On grain					
2. Stitching					
a. Even					
b. Correct length					
c. Stay stitching used					
d. Understitching used where required					
3. Seams					
a. Pressed					
b. Correct width					
c. Not puckered or stretched					
d. Correct finish					
4. Fullness					
a. Darts tapered and pressed in right direction					
b. Gathers evenly distributed					
5. Neckline or waistband finish					
a. Facings or binding correctly applied and fastened					
6. Armseye Finish					
a. Facing or binding correctly applied					
b. Sleeve (ease properly adjusted.) Cuff or hem properly attached					

Workmanship	1	2	3	4	Comments
7. Waistline Finish					
a. Skirt belt has interfacing neatly finished at ends					
b. Reinforcement on dress waistline finish					
8. Interfacings					
a. On grain					
b. Correctly applied					
9. Zipper					
a. Free from bumps or puckers					
b. Inconspicuous, works freely					
c. Straight stitching					
10. Hem					
a. Even					
b. Inconspicuous on right side					
c. Suitable finish and hemming stitch					
11. Fastenings					
a. Buttonholes, correctly placed, suitable for fabric					
b. Buttons secure. Shank if needed					
c. Hooks & eyes, snaps, etc. Close enough to prevent gaping. Securely fastened.					
12. Trimming Details					
a. Pockets (Patch or Insert) neatly applied and finished.					
b. Other					

Workmanship	1	2	3	4	Comments
13. Appearance					
a. Garment neatly pressed					
b. Garment is clean					
c. No loose threads on garment					
d. Garment a good fit					

Teaching-Learning Strategies	References	Materials, Media, & Other Resources
- Trainees prepare stitching charts using unthreaded machines.		mimeographed stitching charts
- Label machine parts using overhead transparency.		transparency of diagram of machine parts, overhead projector
- Thread machines and bobbins.		
- Construct a square pin cushion using the machine.		fabric pieces for pin cushions
- Record measurements and select patterns to fit.		tape measures and garment patterns
- Straighten fabric grain and ends for pattern layout.		fabric yardage
- Cut out fabric pieces and indicate markings. Follow pattern guidesheet in construction.		tracing wheel and paper, sheers
- Press form and shape into garment as sewing progresses.		iron, press board, cushions
- Make necessary alterations for fit.		
- Apply fasteners and trim to garments.		garment fasteners and trim
- Prepare a garment scorecard to rate each aspect of construction for finished garments.		mimeographed scorecards

Module Topic: Threading Power Sewing Machines*

Generalization: *A knowledge of items of equipment and sewing terms facilitates communications. A knowledge of the parts of the sewing machine and the function of each contributes to effective use of the machine. Decisions regarding choice of sewing equipment vary with the type of construction to be done.*

Instructional Objectives:

1. Given power sewing machines (i.e., lockstitch, overlock, button, buttonhole, and blindstitch), list in writing the specific functions of each.
2. Given power sewing machines (i.e., lockstitch, overlock, button, buttonhole, and blindstitch), the trainee will thread each according to provided diagrams with 100% accuracy.
3. Given a bobbin, the trainee will operate the bobbin-winding mechanism on a power sewing machine and wind the bobbin until full in preparation for sewing.
4. Given a wound bobbin, the trainee will insert the bobbin in a power machine so that it clicks in and, if necessary, thread the loopers.

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*This material was pilot tested by research project personnel.

Competencies	Criterion-Referenced Measures
1. Distinguish the functions of various power sewing machines.	1. Listing in writing of the functions of the lockstitch, overlock, button, buttonhole, and blindstitch. A. Lockstitch 1) Used for making darts, piecing, shouldering, joining, setting collars, facings, and zippers B. Overlock or serger 1) Sleeving 2) Joining 3) Finishing facings, edges C. Blindstitch 1) Hemming D. Buttonhole 1) Makes any size buttonhole 2) Automatically cuts through it 3) Cuts thread E. Button machine 1) Sews any flat button 2) Sews any shank button 3) Cuts threads automatically (See Chart, "Types of Power Machines and Their Functions", App. B, p. B-11.)
2. Thread power sewing machines in preparation for stitching.	1. Threading of power sewing machines according to diagrams provided by the instructor.
3. Operate the mechanism on a power sewing machine to wind the bobbin.	1. Winding of one bobbin until full.
4. Insert a bobbin in a power sewing machine and thread the loopers.	1. Insertion of bobbin in a power machine so that it clicks in and threading of the loopers.

Teaching-Learning Strategies	References	Materials, Media, & Other Resources
- Attach labels to each type of power sewing machine and write in the label of each machine over its functions listed on a chart.		prepared labels and mimeographed chart of power sewing machine functions
- Instructor demonstration of threading of a variety of power sewing machines		threading diagrams for power sewing machines
- Instructor demonstration of bobbin winding.		
- Instructor demonstration of inserting a bobbin with needle at highest point and threading the loopers.		power machine, bobbin, machine needle and cone of thread

Module Topic: Using Power Machines*

Generalization: *The use and care of sewing equipment influences the quality of workmanship and the satisfaction derived from sewing. Initial formation of correct sewing habits and techniques prevents many sewing problems.*

Instructional Objectives:

1. Given a power machine and/or a machine diagram, locate and name orally its basic parts.

2. Given stitching charts, operate a machine at high speed, sewing continuously.

3. Given two squares of fabric, set seam gauge, stitch a straight seam and backtack.

4. Given a fabric sample with marked stitching line for dart, make a dart with straight stitching and a precise point.

5. Given fabric samples of varying weights, change feed when needed for smooth operation.

6. Given garment pieces, use folders and gauges properly for maximum sewing speed.

7. Given a power machine with needle, use threading wire to thread needle, using a stopwatch to time speed.

8. Given fabric samples of varying weights, regulate pressure according to fabric for smooth operation, without puckers.

9. Given a power machine and two needles, change machine needles, thread, and check stitching for proper operation.

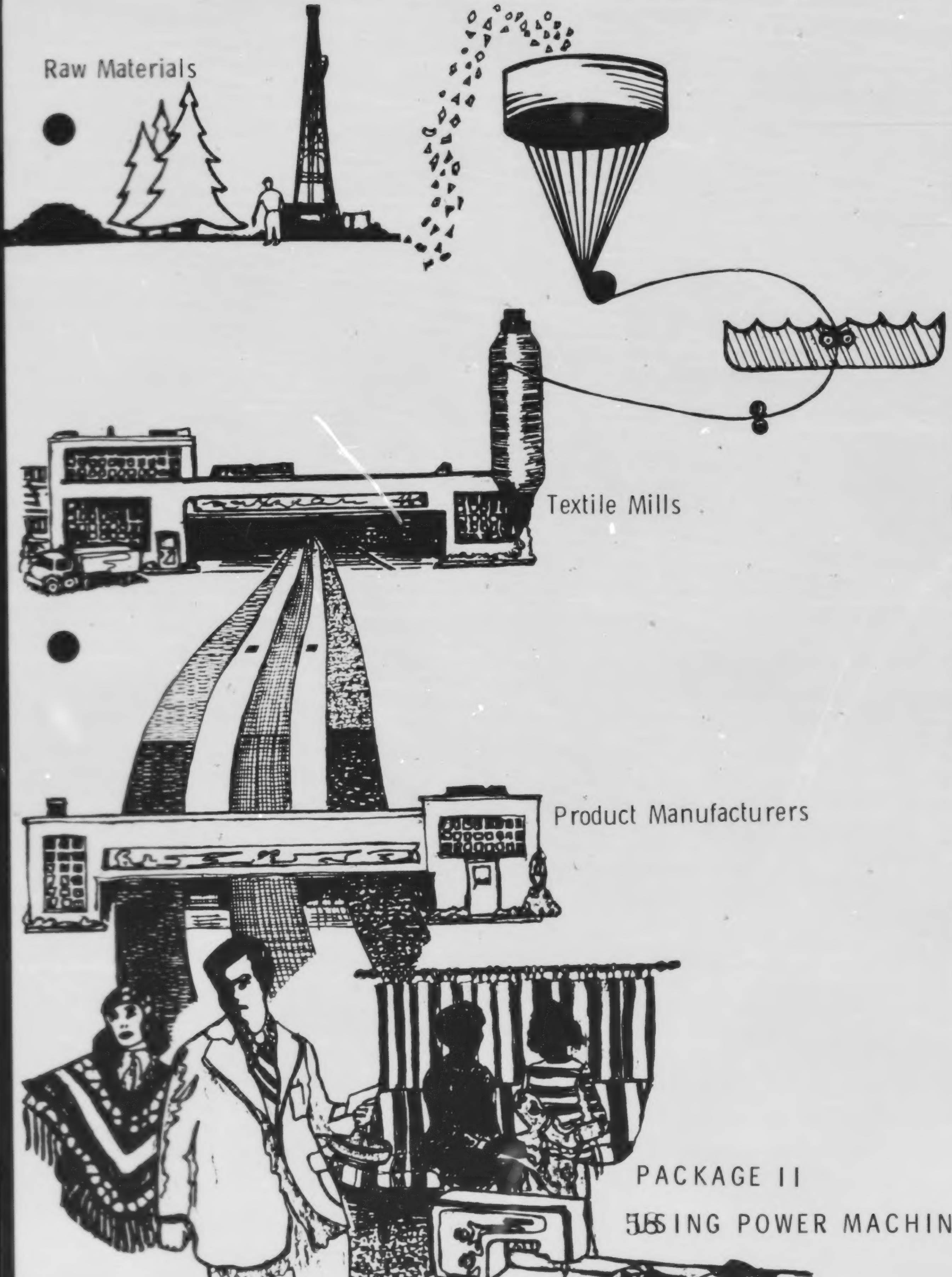
---

*This material was pilot tested by research project personnel.

Competencies		Criterion-Referenced Measures
1. Name and locate basic parts of a power machine.	1.	Labeling parts on a diagram of a power machine. (See Self-Check I, "Labeling Parts of a Power Machine", App. B, p. B-9.)
2. Join two pieces to make 1/2-inch seam.	1.	One-half inch seams made by joining 4" x 8" pieces, edge to edge. Seams should be straight with smooth stitching on both sides, and backtacked at beginning and end.
3. Construct darts in fabric samples.	1.	Dart which is stitched smoothly on marked stitching line and has a precise point.

Teaching-Learning Strategies	References	Materials, Media, & Other Resources
- Trainees fill in information sheets of diagram of power machine.		prepared chart of diagram of power machine and information sheets
- Have trainees set seam gauge, stitch seams and correct mistakes until an adequate sample is prepared.		two 4" x 8" fabric swatches per trainee
- Have trainees practice dart construction until an adequate sample is prepared. Compare to mounted examples of acceptable and unacceptable darts.		fabric swatches, tracing paper and wheel, display mounting of dart sample

CLOTHING SERVICES

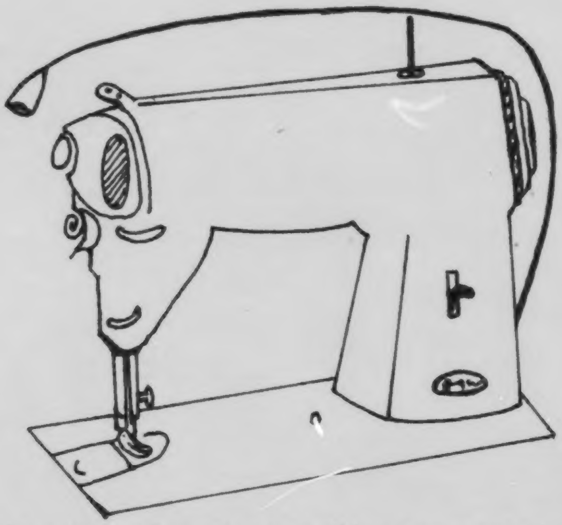

Raw Materials
Textile Mills
Product Manufacturers

PACKAGE II

USING POWER MACHINES

USING POWER MACHINES

Power Machine Construction, Parts, and Functions



INTRODUCTION Certain parts of a power machine are common to most machines. They are the sewing head, the horizontal shaft housing, a vertical or upright arm, and the machine bed. In this package, you will get a closer look at these and other parts of the power machine. Some power machines take slightly different shapes and some have more or fewer parts, depending on the purpose of the machine. All machines fall into just two general categories: the lockstitch and the chainstitch. You will learn to distinguish several types of power machines within these two categories according to the specific functions each machine performs.

DIRECTIONS Read the two goals listed below. If you think that you are already able to complete these assignments, read the Check-Out Activities on the back page. Then, either arrange with your instructor about doing the Check-Out Activities,

or

If you need to complete the lessons in order to be able to do the assignments below, find the two lessons inside this package and go through them in the order in which they are listed.

GOALS

(1) Given a power machine and/or a machine diagram, locate, and name orally its basic parts.

(2) Given power sewing machines (i.e., lockstitch, overlock, button, buttonhole, and blindstitch), list in writing the specific functions of each.

LEARNING ACTIVITIES

1 ▶ READ Information Sheet I, PARTS OF A POWER MACHINE.

2 ✓ TEST YOUR KNOWLEDGE of the basic parts of a power machine by completing Student Self-Check I, LABELING PARTS OF A POWER MACHINE.

3 ▶ VIEW an instructor demonstration of the functions of various power sewing machines (i.e., lockstitch, overlock or serger, blindstitch, buttonhole, button machine).

4 ✓ TEST YOUR KNOWLEDGE of the functions of various power sewing machines by completing Student Self-Check II, FUNCTIONS OF VARIOUS POWER MACHINES.

5 ✗ ARRANGE with your instructor to complete this package by going through the Check-Out Activities listed on the back page.

▶ Lesson I

Information Sheet I
PARTS OF A POWER MACHINE

First, the portion of a power sewing machine that is visible above the flat work table surface is divided into four general sections:

1. The sewing head, which is the busiest part of the machine because it contains the shaft which holds the needle, the presser foot spring and assembly, the take-up mechanism and the tension spring and release, besides other important parts.

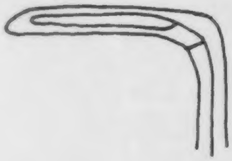
2. The horizontal shaft housing which supports the sewing head and contains the shaft and bearings which drive the moving parts of the sewing head.

3. A vertical or upright arm which carries the power from the motor assembly below by means of driving shafts, belts, and rods to the rest of the arm.

4. Last but certainly not the least important is the bed of the machine. This too is a busy part of the machine since it holds up the whole works and furnishes an upside-down mounting for all the moving parts underneath. Here you will find the feed dog mechanism, bobbin and bobbin case, sewing hooks or loopers, eccentric cams, and, of course, shafts which transmit power to the moving parts.

We are going to get a closer look at these and other parts of the machine, and we are going to learn that some sewing machines take slightly different shapes and some have more or fewer parts, depending on the purpose of the machine. Fortunately, all machines fall into just two general categories: the lockstitch, and the chainstitch.

1. Lockstitch machines--bobbins and bobbincases*
2. Chainstitch--loopers** ⟶



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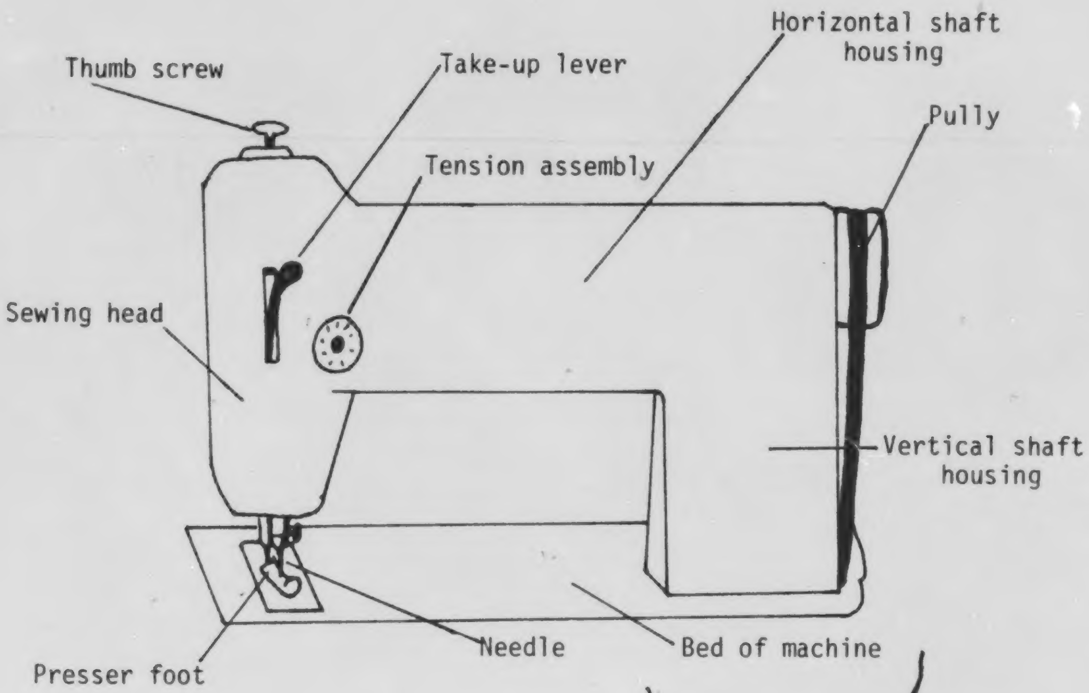
[*] Lockstitch means each stitch is locked to the extent that you cannot pull it out.

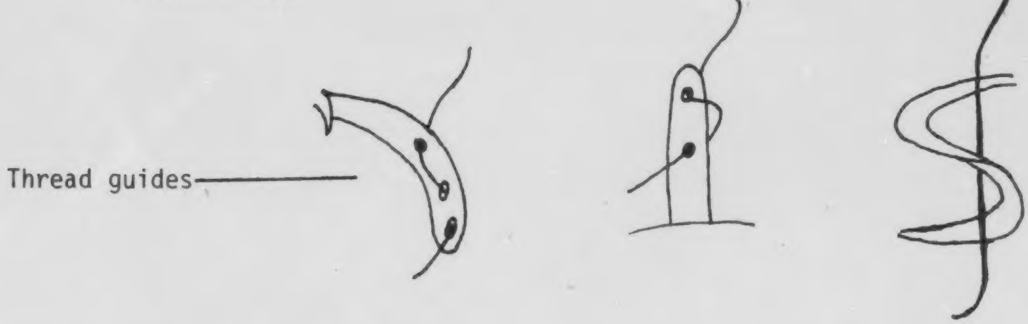
[**] Chainstitch means you may remove stitches by pulling a thread at the end where you stop sewing.

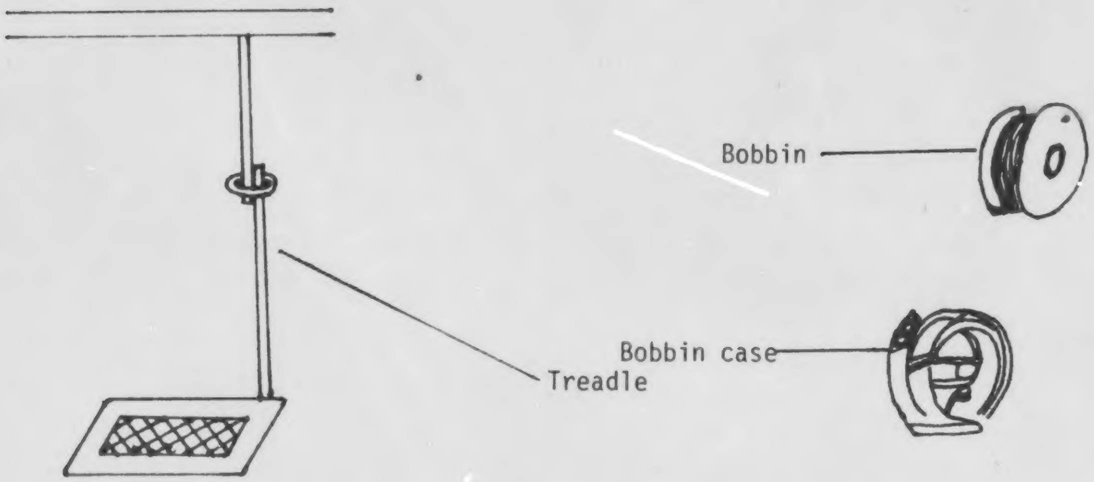
3. Found on all machines--thread tension devices
needle bar
presser foot assembly
feed dogs
throat plates
sewing hooks
take-up lever

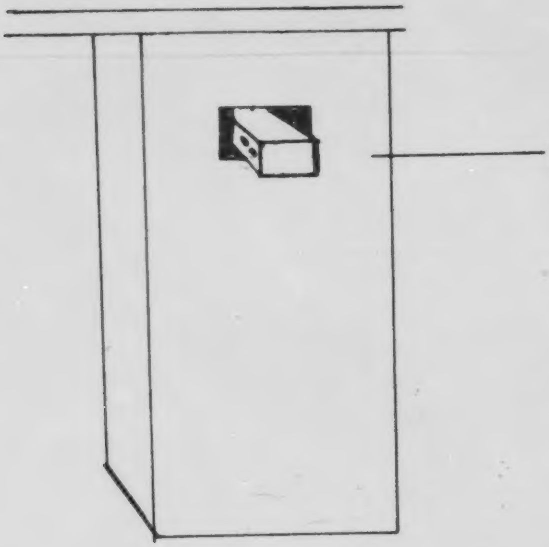
Feeding devices used in sewing machines are designed to pass two pieces of material through the machine so that they will be seamed together continuously and come out even at the end of the seam. The feed drive eccentric assembly is the assembly of feeding parts that passes the material through the machine at a given number of stitches per inch. The feed dog is the part of this feeding mechanism that has rows of teeth to feed the material through the machine. There are several kinds of feed dogs that pass material through the machine that may be found in the machine trade manuals. One mechanism that is referred to as a "puller" is a top-roller feeding device that helps pull the material through the machine and can be used to help the feeding action of the feed dog.

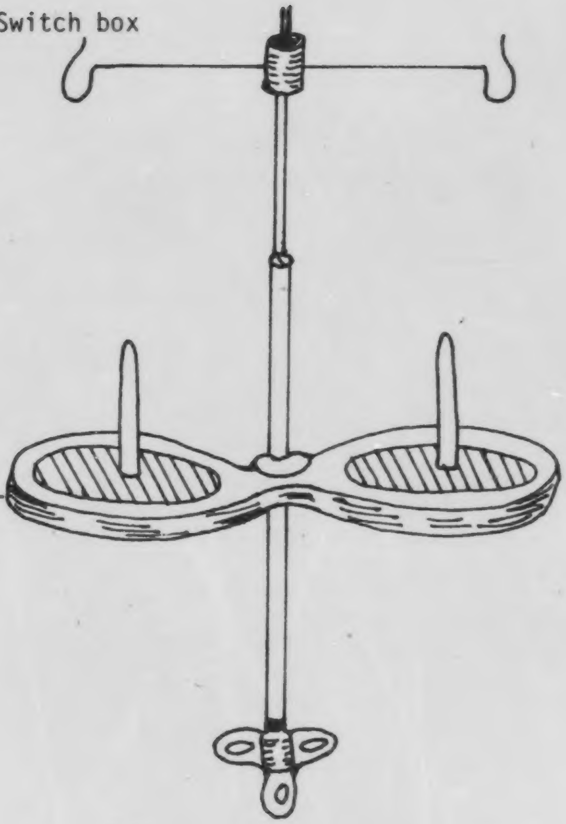
On the pages which follow, you will see labeled diagrams of the parts of the power machine and a listing of the names of the parts.

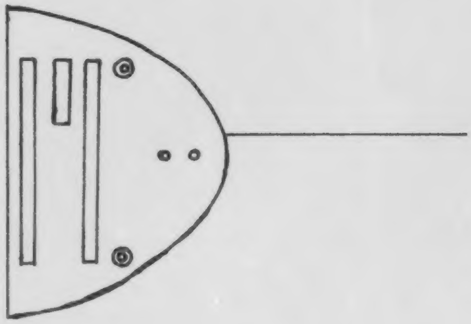

Thumb screw
Take-up lever
Horizontal shaft housing
Pully
Tension assembly
Sewing head
Vertical shaft housing
Presser foot
Needle
Bed of machine

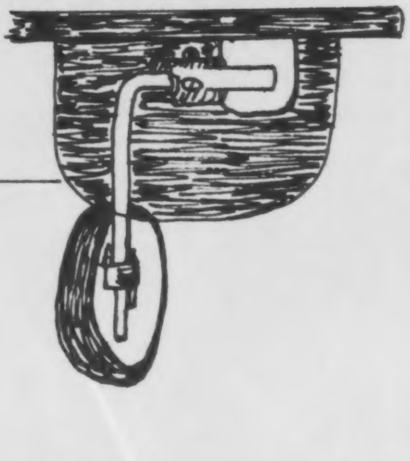

Thread guides


Bobbin
Bobbin case
Treadle


Switch box


Thread stand


Bed plate


Knee lift

PARTS OF MACHINE

PFAFF 463, 463/900 thread trimmer and 467

1. Thread stand
2. Thread guide
3. Bobbin winder
4. Bobbin thread guide
5. Head
6. Balance wheel
7. V-strap or belt
8. Oil window
9. Pressure regulating screw
10. Take-up lever
11. Needle tension
12. Presser foot
13. Presser foot lifter
14. Needle bar
15. Needle
16. Bed
17. Bed plate
18. Bed slide
19. Feed dog
20. Basket
21. Bobbin
22. Bobbin case
23. Oil drip pan
24. Knee presser foot lifter
25. Stand
26. Table
27. Motor
28. Treadle
29. Switch box
30. Drawer

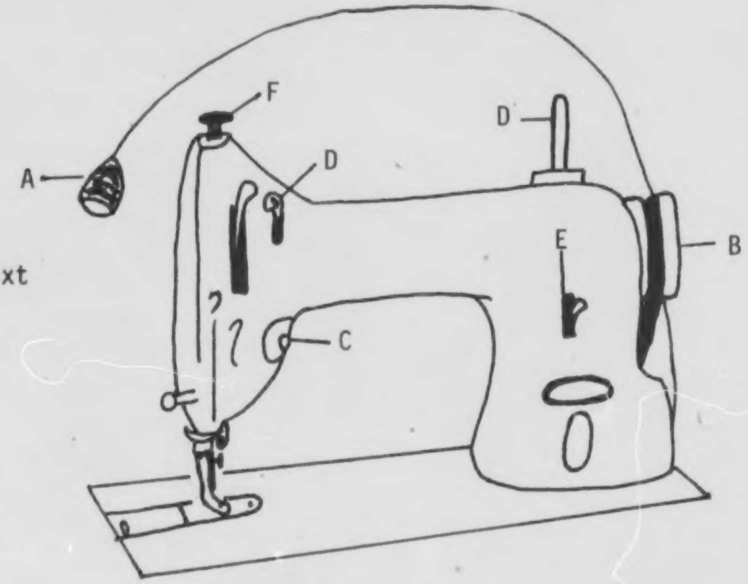
Note: Needle positioner requires a second pedal, the one on the left is used to trim thread by using the heel of your left foot, and by using the toe of your left foot you backtack.

Changing stitches on both machines is a result of pressing tab and turning wheel located at the base of the machine, under balance wheel, to selected number.

√ Self-Check I

LABELING PARTS OF A POWER MACHINE

Listed below are names of machine parts pictured on the right. Beside each name, write in the letter which points to location of the part of the machine diagram. After you have finished, check your answers with those at the bottom of the page. If they do not agree, read Information Sheet I again.



Example: LIGHT = A

Do the same thing to the next five words:

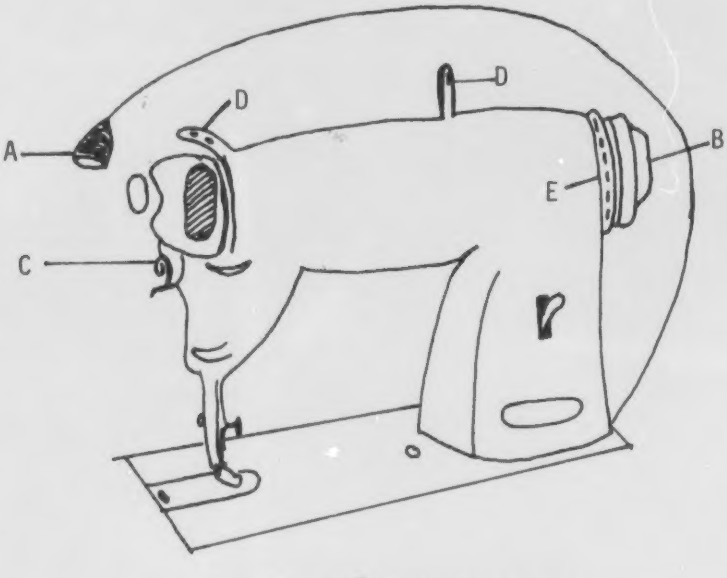
Stitch changer = ____

Balance wheel = ____

Thumb screw = ____

Thread guide = ____

Tension assembly = ____

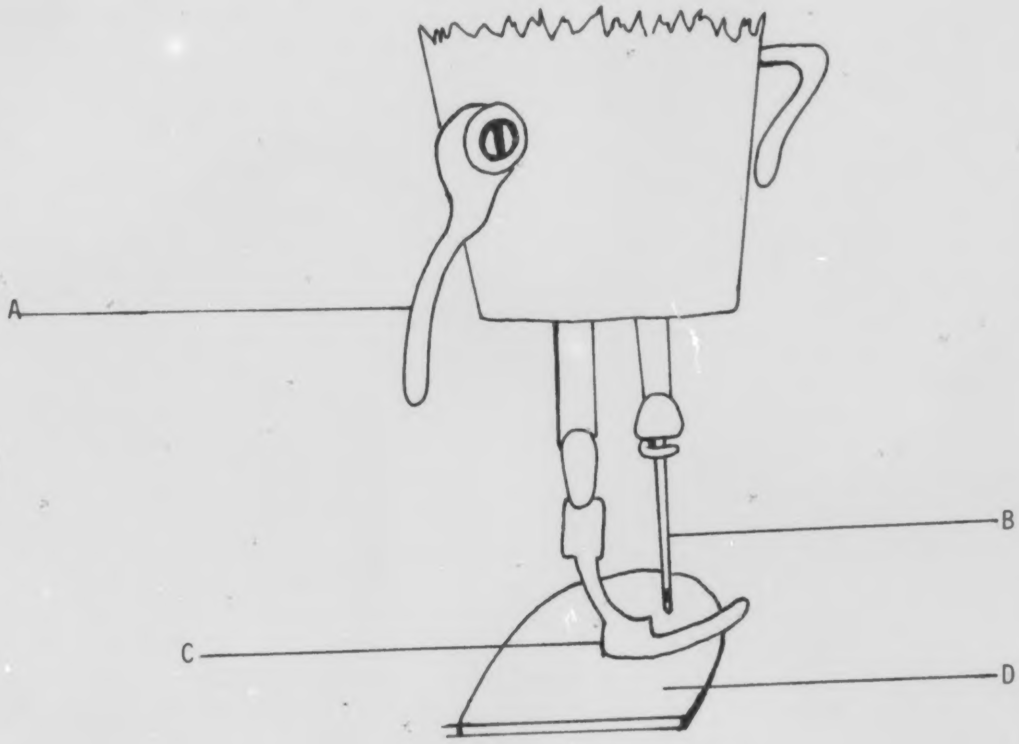


Answers: A = Light, B = Balance wheel, C = Tension assembly, D = Thread guide,
E = Stitch changer

✓ Self-Check I (Cont.)

LABELING PARTS OF A POWER MACHINE

Write the name of the part on the line beside each letter. After you have finished, check your answers with those at the bottom of the page. If they do not agree, read Information Sheet I again.



Answers: A = Presser bar lever, B = Needle, C = Presser foot, D = Throat plate

▶ Lesson II

FUNCTIONS OF VARIOUS POWER MACHINES

Instructor Demonstration

Your instructor will demonstrate functions of these power machines: lockstitch, overlock or serger, blindstitch, buttonhole, button machine.

After the demonstration, you will be given labels for each machine to try to match an accurate label to each machine. On the next page is a chart of power sewing machine functions. You are to write in the label of each machine, in the blank provided over its functions listed on the chart.

EQUIPMENT AND SUPPLIES

Power Sewing Machines

Labels written on cards for five (5) different power sewing machines: lockstitch, overlock or serger, blindstitch, buttonhole, button machine.

B-11

Chart

TYPES OF POWER SEWING MACHINES AND THEIR FUNCTIONS

A. ______________________________

(1) Used for making darts, piecing, shouldering, joining, setting collars, facings, and zippers (FUNCTIONS)

B. ______________________________

(1) Sleeving
(2) Joining (FUNCTIONS)
(3) Finish facings, edges

C. ______________________________

(1) Hemming (FUNCTIONS)

D. ______________________________

(1) Makes any size buttonhole
(2) Automatically cuts through it (FUNCTIONS)
(3) Cuts thread

E. ______________________________

(1) Sews any flat button
(2) Sews any shank button (FUNCTIONS)
(3) Cuts threads automatically

Directions: You will be given labels for each machine to try to match an accurage label to each machine. Then, you are to write in the label of each machine, in the blank provided over its functions.*

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[*] The machine labels you should have are Blindstitch, Buttonhole, Button Machine, Lockstitch, and Overlock or Serger.

✓ Self-Check II

FUNCTIONS OF VARIOUS POWER MACHINES

Put a letter in the blank to the left of each function in Column I to indicate the power machine it matches in Column II. After you have finished, compare your answers with those at the bottom of the page. If they do not agree, go through Lesson II again.

____ 1. used to insert zippers

____ 2. used to insert sleeves

____ 3. used to hem

____ 4. used to cut buttonholes

____ 5. used to attach any shank button

a. blindstitch

b. buttonhole

c. button machine

d. lockstitch

e. overlock or serger

Answers: 1. d, 2. e, 3. a, 4. b, 5. c

Instructor's Final Checklist

USING POWER MACHINES

Check the trainee's performance in the following elements of using power machines.

Place an X in the appropriate box indicating not accomplished, partially accomplished, or fully accomplished. If, because of special circumstance, the item was impossible to complete, place an X in the "Not Applicable" box.

	Trainee Performance			
	Not Applicable	Not Accomplished	Partially Accomplished	Fully Accomplished
1. The trainee named 30 parts	☐	☐	☐	☐
2. The trainee listed all functions of five power machines	☐	☐	☐	☐

Performance Level: All items must receive a rating of FULLY ACCOMPLISHED (or Not Applicable). If any items are rated NOT ACCOMPLISHED, or PARTIALLY ACCOMPLISHED, the trainee and instructor will discuss this and decide which lessons must be repeated.

✓ CHECK-OUT ACTIVITIES

The statements below explain the activities you must be able to complete in order to finish this booklet. After you complete the activities, your instructor will rate your performance using the Instructor's Final Checklist, USING POWER MACHINES, page 13.

I. Provided with a power machine, locate and name orally 30 parts.

II. List in writing the functions of each power machine below:

A. Lockstitch
   1. Used for making ______________, ______________, ______________, ______________, setting ______________, ______________, and ______________.

B. Overlock or serger
   1. ______________
   2. ______________
   3. Finish ______________, ______________

C. Blindstitch
   1. ______________

D. Buttonhole
   1. ______________
   2. ______________
   3. ______________

E. Button machine
   1. Sews any ______________ button
   2. Sews any ______________ button
   3. ______________

Module Topic: Cleaning and Oiling Power Sewing Machines*

Generalization: *The proper care and use of a power machine extends its life and efficiency.*

Instructional Objectives:

1. Given a brush, cheesecloth, and tweezers, remove all dust and lint from the moving parts of a power machine.
2. Given a machine with an oil reservoir, perform a routine check of the oil filter system and the oil return pump assembly.
3. Given a machine which requires manual oiling, oil all holes with red markings and clean up residue.
4. Given a machine with an oil pump and reservoir, clean or replace the filters to avoid damage to the pumps.

---

* This project was pilot tested by research project personnel.

Competencies	Criterion-Referenced Measures
1. Remove dust and lint from the moving parts of a power machine.	1. Removal of all dust and lint from a power sewing machine at the end of a workday.
2. Check oil return pump assembly and oil distribution system from reservoir for proper functioning without leaks.	1. Unclogging of the oil distribution system and filling of the oil reservoir with the specified machine oil without additives.
3. Clean or replace filters on a power machine with an oil pump and reservoir.	1. Cleaning of filters by soaking and backwashing to remove dirt and foreign matter.
4. Manually oil holes with red markings on a power sewing machine.	1. Oiling in all indicated locations and polishing to clean up residue.

Teaching-Learning Strategies	References	Materials, Media, & Other Resources
- Turn off machine motor for instructor demonstration of removing dust and lint from a power machine. Air-blow tension to remove lint. - Instructor demonstration of the parts and proper functioning of the oil return pump assembly and the oil distribution system. - Instructor demonstration of cleaning or replacing filters and checking all clean out plate gaskets, pipe plugs, and pipe connections for tightness. - Instructor demonstration using a copper oiler to manually oil a power sewing machine. Leave a fabric scrap under presser foot to catch oil drips.		

Module Topic: Adjusting Machine Stitching

Generalization: *Skill in operation and care, prevention and correction of machine difficulties contributes to performance and satisfaction in using the machine. Proper length of stitch and tension setting depends upon the type of fabric used and the nature of the construction task.*

Instructional Objectives:

Given common stitching maladjustments (i.e., breaking of needle thread or bobbin thread, skipping stitches, puckered seams, breaking or damage to needle), perform a prescribed series of checks until stitching is corrected in each case.

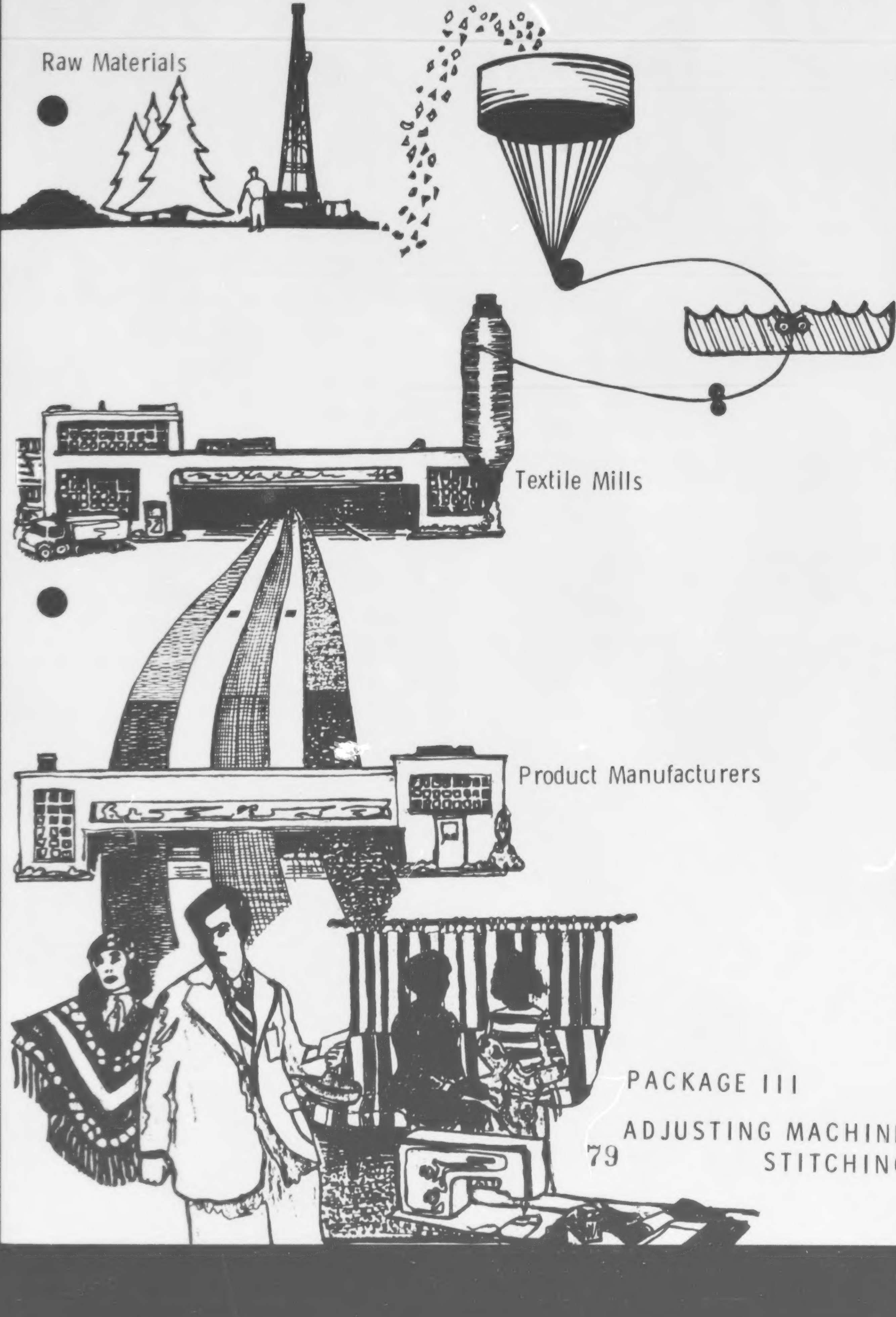
---

*This material was pilot tested by research project personnel.

Competencies	Criterion-Referenced Measures
1. Adjust tensions as necessary for even stitching using a variety of threads and fabrics.	1. Adjustment of top and bottom tensions to achieve balanced stitching, as determined by breakage of thread in a diagonally seamed square of fabric. (See Instructor's Final Checklist, "Adjusting Machine Stitching",
2. Replace needle when it is broken or damaged or size is inappropriate for thread or fabric.	1. Replacement of needle so that it is set correctly and inserted all the way in. (See above.)
3. Adjust the thumb screw to regulate pressure of the presser foot on the fabric when it is being stitched.	1. Adjustment of pressure of presser foot for heavy and lightweight fabrics so that all seam edges are handled evenly without side creepage of material and the fabric moves easily under the presser foot without showing feed marks. (See above.)

Teaching-Learning Strategies	References	Materials, Media, & Other Resources
- Instructor demonstration of stitching of fabric seams in which tensions are too tight, too loose, or balanced		chart illustrating tensions which are too tight, too loose, or balanced; squares of fabric
- Instructor demonstration of incorrect setting of needle and correct needle replacement and of check for bent needle		a variety of sizes of machine needles
- Instructor demonstration of adjusting pressure of presser foot for lightweight and heavy fabrics		lightweight and heavy fabric swatches

CLOTHING SERVICES


Raw Materials
Textile Mills
Product Manufacturers

PACKAGE III

ADJUSTING MACHINE STITCHING

ADJUSTING MACHINE STITCHING

INTRODUCTION	When a mechanic approaches an operator who has called him or her because of machine problems, there are certain general procedures which should be followed. Most machine problems can be solved without removing parts. In this package, you will learn to check the obvious things first.
DIRECTIONS	Read the goal listed below. If you think that you are already able to complete this assignment, read the check-out activity. Then, either arrange with your instructor about doing the Check-Out Activities, or If you need to complete the lessons in order to be able to do the assignment below, find the lessons inside this booklet and go through them in the order in which they are listed.
GOAL	Given common stitching maladjustments (i.e., breaking of needle thread or bobbin thread, skipping stitches, puckered seams, breaking or damage of needle), perform a prescribed series of checks until stitching is corrected in each case.

LEARNING ACTIVITIES

1 ▶ READ Information Sheet I, DIAGNOSING MACHINE PROBLEMS.

2 ✓ TEST YOUR KNOWLEDGE of diagnosing machine problems by completing Student Self-Check I, DIAGNOSING PROBLEMS.

3 ▶ VIEW an instructor demonstration on correcting maladjustments on a power sewing machine, and practice the demonstrated techniques.

4 ✓ TEST YOUR KNOWLEDGE of correcting maladjustments by completing Student Self-Check II, CORRECTING MALADJUSTMENTS ON POWER MACHINES.

5 ✗ ARRANGE with your instructor to complete this package by going through the Check-Out Activities listed on the back page.

▶ Lesson 1

Information Sheet I
DIAGNOSING MACHINE PROBLEMS

When a mechanic approaches an operator who has called him because of machine problems there are certain general procedures which should be followed. By doing this, machine down time will be minimized, operator's productivity increased, maintenance cost reduced, and the mechanic's time made more available.

A suggested list in outline form prepared by Union Special Corporation is presented here for your use.

SEWING MACHINE
"PREVENTIVE MAINTENANCE CHECK LIST"[1]

I. Requirements
  A. Machine Shop Library
    1. Up-to-date Parts Catalogs and Adjusting Instructions on all style machines being used.
    2. Everyone responsible for keeping the machines running properly should read and study the instructions on the proper care of the machines.
    3. A periodic check by the head mechanics must be made to make sure instructions are being followed.
    4. Beneficial notes and suggestions can be written in the manuals as an aid to future trainees.
  B. Spare Parts
    1. Good storage cabinets.
    2. Proper records kept on parts used, ordered, and received.
    3. Sufficient inventory of needles, bobbins, presser feet, feed dogs, throat plates, and all essential parts.
    4. Individual machine record cards. (Request samples of Forms #233, 234, & 237 from Union Special at no charge.)
    5. Prohibit borrowing parts from other machines.
  C. Equipment
    1. Well equipped machine shop.
    2. Proper tools and gauges.

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[1] Reprinted by permission of Union Special Corporation, 400 North Franklin Street, Chicago, IL 60610.

3. Adequate machine oil supply.
    a. Separate containers, identified properly for type and viscosity of oil.
    b. Proper type individual oil cans for machines requiring manual lubrication.
    c. Posted charts indicating which oil is to be used in which machine.
    d. Container for old used oil.
4. Fireproof container for machine cleaning solvents.
5. Adequately dry; compressed air supply to shop and all areas of sewing room. (Cautious use of compressed air is a real asset for cleaning of parts and machines.)
6. Posted safety precautions for using power tools.
    a. Safety glasses.
    b. Rules and regulations.

II. Responsibilities

A. Operator
  1. Daily maintenance
    a. Removal of all lint around sewing area with a small brush and/or tweezers.
    b. Wipe off excess oil.
    c. Check all oil gauges.
    d. Manual lubrication when and where required.
    e. Machine power off when not in use.
    f. Leave scrap of material under presser foot when machine is not in use.

B. Supervisor or Forelady
  1. Daily maintenance
    a. Inspect to see that all operators in department carry out their daily maintenance duties.
    b. Check to see that all safety precautions are being followed.
    c. Re-fill needle case with proper types and sizes for all the different style machines in department.
    d. Dispose of all broken or damaged needles in a proper container. They must not be left in machine, table drawers, stuck in pads or cushions, or dropped on floor.
    e. Notice threads being used.
    f. Machines properly threaded. Bobbin winder thread (all other threads) a safe distance away from area of machine handwheel and vee-belt.

C. Mechanics
  1. Daily maintenance
    a. Lubricate special machines which cannot be cared for by operator.
    b. Check air, oil, and steam supply
    c. Inspect tools.
    d. Report to supervisor or forelady any maintenance duties being neglected by operators.

2. Weekly maintenance
    a. Inspect all machines--where required--clean with air* brush, or tweezers.
    b. Machines with open type oil reservoirs must be free of all lint and foreign matter and oil level checked.
    c. Order parts and needles required to maintain stock.
    d. Calculate machine maintenance cards and report to manager any excessive use of parts and/or needles, or excessive down time.
    e. Have all spare equipment in operating condition.
    f. Check shop supply for required emery cloth, crocus cloth, emery cord, cleaning solvents, tools, etc.

*NOTE: When using air as a cleaning device, precautions must be taken to prevent oil or oil impregnated lint from getting on or near garments and/or all over machine area and material.

"MECHANIC'S CHECK LIST"[1]

I. ASK THE OPERATOR, "WHAT IS THE PROBLEM?"

A. Possible answers
    1. Needle thread breaking
    2. Bobbin or looper thread breaking
    3. All threads breaking
    4. Skipping stitches
    5. Bad or improper stitching
    6. Breaking needles
    7. Not feeding properly
        a. Puckering
        b. Gathering
        c. Won't cross seams
    8. Oil on machine and/or material
    9. Operator uncomfortable
        a. Foot treadle not positioned properly
        b. Presser foot lifter (not set properly)

B. Watch Operation Being Performed to Confirm Problem

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[1] "Mechanic's Check List" (This list pertains to machines which are in production and sewing, but are giving trouble to the operator.) Reprinted by permission of Union Special Corporation, 400 North Franklin Street, Chicago, IL 60610.

II. Procedure Before Touching the Machine*

- A. Observe type of thread being used and threading of machine.
  - 1. Proper thread and needle sizes for operation
  - 2. Proper twist thread
  - 3. Cone or spool sitting flat on thread stand
  - 4. Thread stand eyelets set properly and aligned with cones to assure no drag on the threads while the machine is running
  - 5. Machine thread eyelets set properly and threaded correctly
  - 6. All tensions threaded correctly
- B. Observe how machine is running.
  - 1. Quiet, smooth, and steady at full rpm.
  - 2. Noisy, and vibrating at fast and slow speeds
    - a. Vee-belt not properly set in motor pulley or machine pulley (alignment of drive to machine)
    - b. Vee-belt too tight or too loose
    - c. Thread wrapped around either pulley
    - d. Vee-belt split or frayed
    - e. Vee-belt is oil soaked
    - f. Motor pulley or machine handwheel loose or damaged
    - g. Improper pulley size--check machine rpm with a tachometer and compare reading with machine speed chart--DO NOT OVERSPEED!
  - 3. Lubrication
    - a. Check oil gauges.
    - b. Check for oil leaks.
- C. Observe operator's position to machine
  - 1. Comfortable position to sewing table height
  - 2. Treadles and pedals properly set
  - 3. Knee lifter and all other aids conveniently located
- D. Observe motor adjustments
  - 1. Clutch adjustment
    - a. Too much lost motion in treadle
    - b. Not enough motion in treadle
  - 2. Use minimum clutch spring tension.

III. Procedure After Sitting Down at Machine

- A. Systematic analysis before taking machine apart
  - 1. Check the needle: IS IT . . .
    - a. Improperly set in holder
    - b. Bent
    - c. Blunt
    - d. Sharp or worn around eye or grooves
    - e. The proper type and size for thread and material being sewn
    - f. If not, replace with correct type and size.

*NOTE: Most machine problems can be solved without removing parts. Check the obvious things first. Getting the machine back in productive sewing condition as soon as possible will please everyone concerned. The more parts removed, the more have to be replaced.

2. Check threading again.
    a. Needle thread
    b. Bobbin and/or looper threads
3. Remove lint or excessive oil in and around sewing area.
4. Run the machine yourself to see if your minor adjustments have corrected the problem.
5. Be sure machine is capable of performing the required operation.
    a. Proper needle height travel
    b. Proper sewing combination (foot, plate, and feeds)
6. If you are satisfied with the performance of machine, have operator or supervisor try it again.
7. If you are not satisfied with machine's performance, proceed with the adjusting instructions furnished with the particular machine style.

B. Basic machine adjustments (Reference to Machine Adjustment Manual)
    1. Check all thread control eyelets, take-ups, and thread handling devices.
    2. Check the foot, throat plate, and feed dogs to assure good feeding.
        a. Foot resting flat on plate with proper amount of pressure
        b. Throat plate secured tightly, aligned properly with needle with proper needle hole for the size of needle and stitch length being used
        c. Feed dogs set properly (back to front) and (right to left) with clearance all around. Height and tilt adjustment set properly for operation being performed
    3. Check the needle bar height and all areas relative to the needle
        a. Presser foot
        b. Throat plate
        c. Needle guards
        d. etc.
    4. Check timing and position of hook and/or loopers to needle and all other relative parts.
    5. Check for binds and/or worn or loose parts.
        a. Machine must turn over freely by hand without too much shake or lost motion.
    6. Refer to individual machine adjusting instructions for more detailed adjustment.

C. After completing adjustments, make sure all screws are tightened securely.

D. Demonstrate how well it sews on scrap material, then let operator or supervisor try it. If they are satisfied, thank operator and supervisor for suggestions, help, patience, and leave.

E. If problem persists, consideration should be given to replace machine temporarily with a spare so problem machine can be carried to the shop for a more detailed analysis and repair.

F. Major machine adjustments and repairs are covered under individual machine style manual and adjusting instructions.

"WARNING SIGNALS"
(Use Your Senses)

I. "LOOK" FOR . . .

- A. Excessive oil accumulating anywhere on the outside of machine
- B. Unusual motions in machine or motor
- C. Excessive lint, loose threads, and materials in and around sewing and drive belt area
- D. Smoke

II. "LISTEN" . . .

- A. For unusual noises, such as:
    - 1. Rattles
    - 2. Grinding
    - 3. Clatter
    - 4. Gritting
- B. To speed of machines and motors
    - 1. Over speeding
    - 2. Slow running
        - a. Low voltage
        - b. Improper phase
- C. To what operator, supervisor, and/or forelady have to say about machine or motor.
- D. For air or steam escaping.
- E. To see that all motors are off when machines are idle.
- F. For safety alarms, bells, buzzers, or whistles.

III. "FEEL" . . .

- A. For unusual vibration in machines or motors
- B. To be sure motors stop running when switch is in "OFF" position
- C. To see if any part of the machine is running too hot
- D. For lost motion and worn parts

IV. "SMELL" . . .

- A. For smoke from:
    - 1. Overheating metal
    - 2. Electrical insulation burning
    - 3. Burned oil
    - 4. Thread burning
    - 5. Electronic parts burning
        - a. Solenoids
        - b. Coils
        - c. Transformers
        - d. Rectifiers
- B. Unusual odors

✓ Self-Check I

DIAGNOSING MACHINE PROBLEMS

A. Put an X in the box before the statements that describe preventive maintenance responsibilities which are expected of the power machine machanic. After you have finished, compare your answers with those at the end of this section. If they do not agree, go through Lesson I again.

☐ 1. removal of all lint around moving machine parts with a small brush and/or tweezers at least once a day

☐ 2. check threading in machines each day for correct threading

☐ 3. check oil guages each day

☐ 4. check oil level each week in machines with oil reservoirs

☐ 5. refill needle case each day with proper types and sizes for all different styles of machines

☐ 6. use manual lubrication on special machines each day (by hand)

Answers: ☒ 4., ☒ 6.

B. Write the lists requested below. After you have finished, compare your answers with those at the end of this section. If they do not agree, go through Lesson I again.

1. List three of six possible problems caused by type of thread being used and threading of machine.

   a.

   b.

   c.

2. List two of four possible problems caused by machine needles:

   a.

   b.

Answers: 1. (a) improper thread in use for the operation (b) improper twist thread-S or Z (c) cone unsteady on thread stand (d) setting or alignment of thread stand eyelets with cones (e) setting of machine thread eyelets (f) accuracy of threading, especially tensions (g) poor quality of thread. (Any 3)

2. (a) needle improperly set into needle bar (b) bent or blunt needle (c) sharp or worn around eye or grooves (d) improper size and type for thread and material being sewed. (Any 2)

▶ Lesson II

CORRECTING MALADJUSTMENTS OF POWER MACHINES

Instructor Demonstration

Your instructor will demonstrate stitching of fabric seams in which tensions are unbalanced, needles are of incorrect size and setting, and presser foot pressure is incorrect. In each case, the maladjustment will be corrected and results compared.

Skills Practice Exercises

Each trainee will practice correcting at least three maladjustments until corrected. Each maladjustment will be reported on the "Record of Repair," page 12.

RECORD OF REPAIR[1]

Trainee's Name ____

Period ____________ Date ______________________________

Job Assignment ____

Time Started ________________ Time finished ______________

____

(Describe briefly repairs to be done.)

____

(Describe briefly what you actually did.)

____

(Bill of Materials)

Quantity	Description	Cost

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[1] Adapted from Little Rock Public Schools, Curriculum Guide, Investigating Career Opportunities (Little Rock, Ark.: Students Metropolitan Vocational-Technical Education Center), September, 1972, p. 318.

✓ Self-Check II

CORRECTING MALADJUSTMENTS ON POWER MACHINES

Choose the one best procedure to correct the described problem in each multiple-choice question below. After you have finished, compare your answers with those at the bottom of this section. If they do not agree, go through Lesson II again.

_____ 1. Stitches on upperside of cloth are loose, sometimes staggered in a wavy line.

a. Insert new needle.
b. Shorten stitch length.
c. Oil machine according to instruction.
d. Tighten upper tension.

_____ 2. Machine is rough and noisy.

a. Use brush and/or tweezers to remove lint and oil build-up in hook or on needle bar.
b. Guide the cloth under the presser foot with a lighter touch.
c. Increase pressure of presser foot.
d. Check accuracy of threading.

_____ 3. The thread breaks at the eye of the needle.

a. Remove lint or excess oil around throat plate
b. Rethread machine and needle.
c. Check set of needle into needle bar or if needle has been threaded from wrong side.
d. Insert a larger size needle.

_____ 4. After stitching, cloth around seamline shows marks from feeddog.

a. Reduce tension on top.
b. Check position of bobbin in bobbin case to see if it clicked in.
c. Reduce pressure of presser foot on cloth by untightening thumb screw.
d. Check if operator pulls on fabric as it feeds in under presser foot.

Answers: 1. d 2. a 3. c 4. c

Instructor's Final Checklist

ADJUSTING MACHINE STITCHING

Check the trainee's performance in the following elements of adjusting machine stitching.

Place an X in the appropriate box indicating not accomplished, partially accomplished, or fully accomplished. If, because of special circumstances, the item was impossible to complete, place an X in the "Not Applicable" box.

	Trainee Performance			
	Not Applicable	Not Accomplished	Partially Accomplished	Fully Accomplished
1. The trainee corrected machine stitching in each of the following cases:				
a. unbalanced tension	[ ]	[ ]	[ ]	[ ]
b. blunt or bent needle, or incorrectly set or sized	[ ]	[ ]	[ ]	[ ]
c. too much pressure on pressure foot	[ ]	[ ]	[ ]	[ ]

Performance Level: All items must receive a rating of FULLY ACCOMPLISHED (or Not Applicable). If any items are rated NOT ACCOMPLISHED, or PARTIALLY ACCOMPLISHED, the trainee and instructor will discuss this and decide which lessons must be repeated.

✓ CHECK-OUT ACTIVITIES

The statements below explain the activities you must be able to complete in order to finish this booklet. After you complete the activities, your instructor will rate your performance using the Instructor's Final Checklist, ADJUSTING MACHINE STITCHING, page 14.

Given a square of fabric, readjust out-of-balance tensions to stitch a diagonal seam in which top and bottom threads break together when the seam is stretched.

Given a machine with bent or wrong size needle, replace needle so that it is set correctly and inserted all the way in.

Adjust pressure of presser foot for two layers of heavy-weight cloth.

Module Topic: Tailoring Techniques+

Generalization: *Position of fabric grain influences fall and pliability of the fabric on the figure. Directional stitching and directional pressing of construction details preserve grain line and enhance the finished product. Skill in choice and use of facing materials and techniques contributes to effectiveness and attractiveness of the garment. The choice of interfacing is determined by the amount of "body" needed. Choice of garment closure is determined by fabric, style and type of garment, and location of the closure. Basic hand stitches are fundamental to construction of a tailored garment. Finishing details, neatness of appearance and correct pressing add value to the completed garment.**

Instructional Objectives:

Given material and supplies and prescribed procedures, tailor a coat or suit. Specifically, each of the following techniques will be performed:

1. Use original pattern pieces to cut interfacing and interlining pieces, mark.
2. Prepare interfacing and interlining; apply to garment pieces.
3. Make bound buttonholes in garment front.
4. "Quilt" canvas interfacing to collar and apply to garment.
5. Prepare neckline/front facing and apply to garment.
6. Hem by hand the bottom and sleeve hems.
7. Insert sleeves into garment.
8. Prepare welt pockets in garment.
9. Cut and prepare garment lining.
10. Insert lining into garment.
11. Sew buttons with shank onto garment.
12. Final press.

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*Adapted from American Home Economics Association, Concepts and Generalizations: Their Place in High School Home Economics Curriculum Development (Washington: American Home Economics Association, 1967), p. 42.

+This material was pilot tested by research project personnel.

Competencies	Criterion-Referenced Measures
1. Prepare fabric and use pattern for cutting and marking details on garment pieces.	1. Garment pieces which are accurately cut on-grain and marked following a pattern.
2. Use tailoring techniques in stitching a garment by hand and machine.	1. Checking progress of garment construction on points such as the following: A. Press every seam before sewing another seam across it. B. Press in "units" to speed work. C. Use pressing tools, temperature, and moisture to press form and shape into garments.
3. Use professional pressing techniques in constructing a garment to achieve a finished look.	1. Examination of seams and handwork in completed garment for use of accurate tailoring techniques.
4. Prepare and stitch inconspicuous garment hems.	1. Examination of hem for evenness and inconspicuous stitching.
5. Sew fasteners to garments to insure a neat appearance and ease of fastening.	1. Evaluation of each bound buttonhole and button for neat appearance, ease of fastening, and secure attachment.

Teaching-Learning Strategies	References	Materials, Media, & Other Resources
- Prepare fabric for cutting. - Instructor demonstration of cutting out pattern pieces and indicating markings. - Instructor demonstration of tailoring techniques, including: 1. rolled collar 2. bound buttonholes 3. welt pockets - Construct individual garments using demonstrated techniques.	Bishop and Arch, The Bishop Method of Clothing Construction, pp. 131-191	fabric yardage, pattern, sheers, iron, press board, cushions
- Prepare a garment scorecard to rate each aspect of construction for finished garments.		mimeographed scorecards

Module Topic: Pattern Drafting+

Generalizations: *Selection of pattern with regard to type and measurements facilitates proper fit with fewer adjustments. The adjustment of fabric to body contour may be accomplished through the manipulation of darts and seams.* Wise use of lines formed by the silhouette, construction, and decorative details, create optical illusion and may be used to help achieve the desired effect. Fitting the pattern carefully may eliminate the need for altering the garment during construction. Pattern symbols expedite the construction process. Knowledge of symbols and their function facilitates laying the pattern, cutting the fabric, and constructing the garment.*

Instructional Objectives:

1. Given a sloper, describe orally how it is made.
2. Given a bodice sloper and a small piece of paper, draft and cut out a pattern piece for a fitted facing.
3. Given a bodice sloper and a large piece of paper, make a shoulder dart design by moving the bust-fitting dart to the shoulder by the pivot method.
4. Given a bodice sloper and a large piece of paper, make a French dart design by closing the waist-fitting dart and the bust-fitting dart using the pivot method.
5. Given a paper tracing of a bodice sloper, make a shoulder dart design by moving the fast-fitting dart to the shoulder by the slash method.
6. Given a paper tracing of a skirt sloper, convert the side dart to flare by the pivot method.
7. Given a paper tracing of a skirt sloper, convert the side dart to flare by the slash method.
8. Given a paper tracing of a sheath sloper, make a French dart design by closing the bust-fitting dart by the slash method.
9. Given a paper pattern made from a bodice sloper, label the following items on the pattern: Center Front, Fold Line, Notches, Grainline, Name of pattern piece.

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*Adapted from American Home Economics Association, Concepts and Generalizations: Their Place in High School Home Economics Curriculum Development (Washington: American Home Economics Association, 1967), p. 42.

+This material was pilot tested by research project personnel.

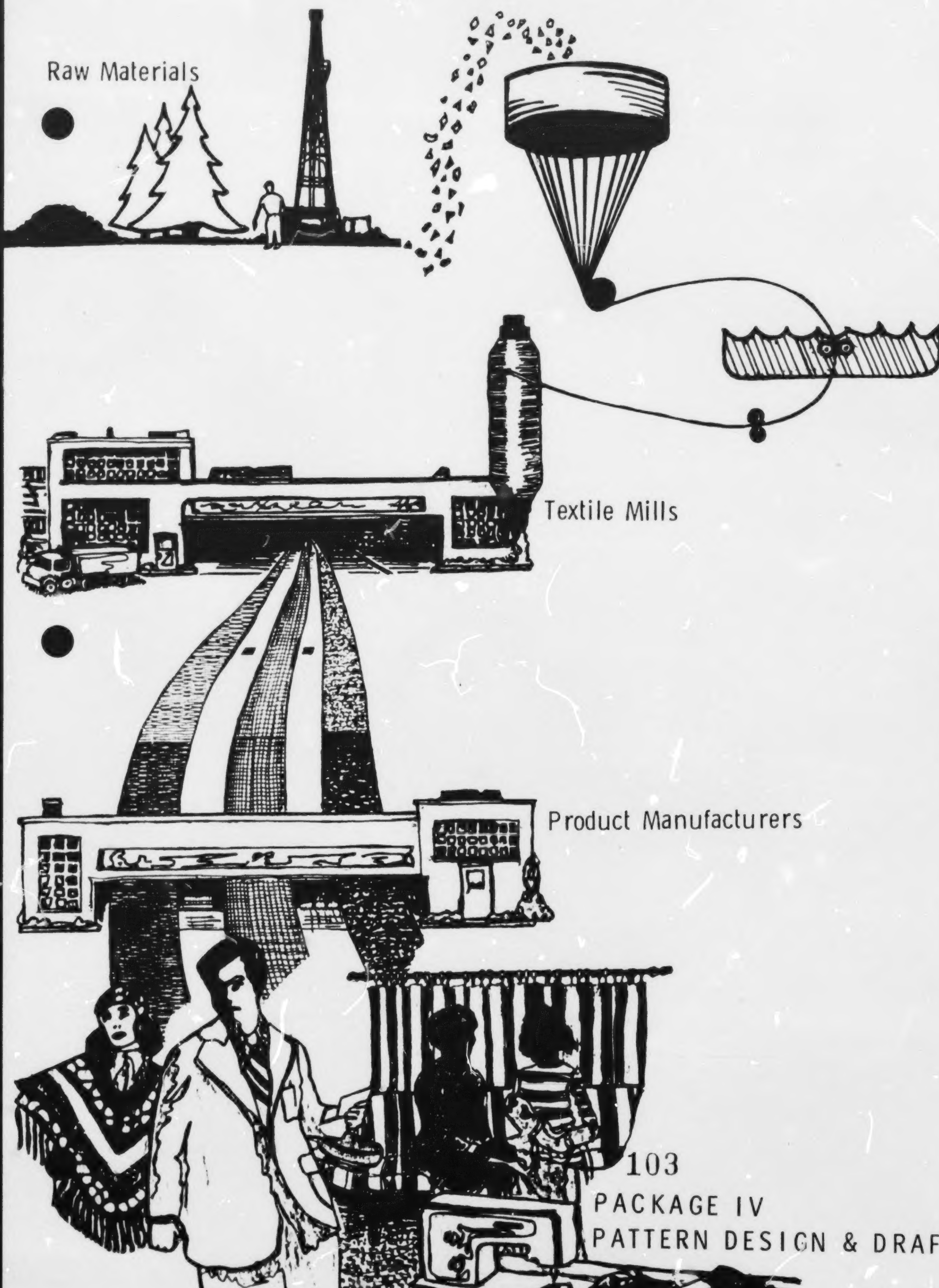
Competencies	Criterion-Referenced Measures
1. Prepare a sloper for a personal pattern	1. Oral description of preparing a sloper (See Self-Check I, "Preparing a Sloper", App. D, p. D-7.)
2. Prepare a fitted neck facing pattern piece for a basic paper bodice pattern	1. Preparation of a facing pattern that is an exact duplicate of the area it faces, is the correct width, and is properly labeled.
3. Make a shoulder dart design in a paper bodice pattern using the pivot method.	1. Preparation of a pattern that lies flat when completed with the transferred dart accurately located and trimmed. (See Instructor's Final Checklist, "Drafting a Pattern", App. D, p. D-10.)
4. Make a French dart in a paper bodice pattern.	1. Preparation of a pattern that lies flat when completed with the transferred dart accurately located and trimmed. (See above.)
5. Make a shoulder dart design in a paper bodice pattern using the slash method.	
6. Convert a side dart to flare in a paper skirt pattern for an A-line skirt, using either the slash or the pivot method.	1. Preparation of a paper A-line skirt pattern that lies flat and is correctly trimmed. (See above.)

Teaching-Learning Strategies	References	Materials, Media, & Other Resources
- Instructor demonstration that the sloper for the personal pattern is a cardboard copy of a commercial basic pattern that has previously been altered to fit (or a prepared muslin shell).	Hollen, Norma R. Pattern Making by the Flat Pattern Method	French curve paper clips tracing wheel scissors
- Instructor demonstration of the procedure for making a facing pattern for a basic paper bodice pattern.	(same as above)	basic paper bodice pattern
- Instructor demonstration of locating the bust point and bust circle on a bodice sloper.		instructor-prepared chart, "Pattern Making with Darts" bodice sloper large piece of paper scissors transparent tape
- Instructor demonstration of moving the bust-fitting dart to the shoulder by the pivot method.		
- Instructor demonstration of how to fold and trim darts so they lie completely flat when the pattern is finished.		
- Instructor demonstration of closing the waist and bust darts to make a combined French dart by the pivot method.		bodice sloper large piece of paper scissors transparent tape
- Instructor demonstration of moving the bust-fitting dart to the shoulder by the slash method.		bodice sloper large piece of paper scissors transparent tape
- Instructor demonstration of preparing an A-line skirt paper pattern from a straight skirt sloper using the slash and pivot methods.	(same as above)	straight skirt sloper large piece of paper scissors transparent tape

Competencies	Criterion-Referenced Measures
7. Convert a bust-fitting dart to a French waistline dart in a paper pattern for a sheath using the slash method.	1. Preparation of a paper sheath pattern with French side dart that lies flat and is correctly trimmed. (See above.)
8. Label a pattern with accurate markings.	1. Preparation of a bodice paper pattern on which markings are accurately located and labeled. (See Self-Check II, "Labeling Pattern Markings", App. D, p. D-9.)

Teaching-Learning Strategies	References	Materials, Media, & Other Resources
- Instructor demonstration of preparing a paper sheath pattern with a French side dart from a sheath sloper and using the slash method.		sheath sloper large piece of paper scissors transparent tape
- Instructor demonstration of labeling markings on prepared paper bodice pattern. Markings include: 1. Center Front (C.F.) 2. Fold line (∴) 3. Notches (▲) 4. Grainline (⟷) 5. Name of pattern pieces		overlay transparency of labeled bodice pattern piece

CLOTHING SERVICES


Raw Materials
Textile Mills
Product Manufacturers

PACKAGE IV
PATTERN DESIGN & DRAFTING

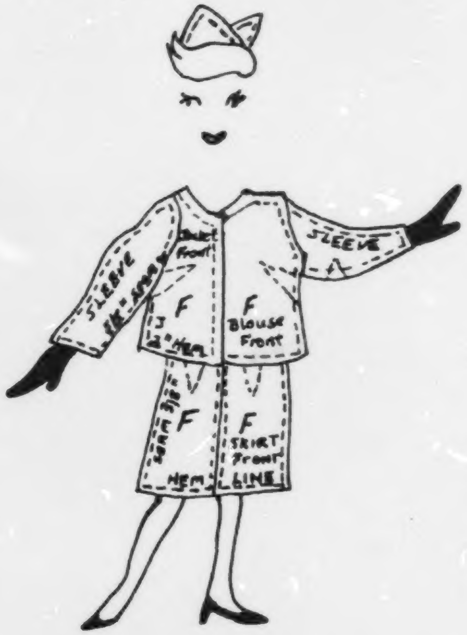
Appendix D

PATTERN DESIGN AND DRAFTING

Preparation of Slopers and Paper Patterns

INTRODUCTION

The Flat-Pattern Method is one technique of making a garment pattern. Flat-pattern work starts with a bought basic pattern that has been altered to fit the individual. The pattern work consists of changing this basic pattern to make a pattern for a chosen design. The work is done in paper on a flat surface.



DIRECTIONS

Read the nine goals listed below. If you think that you are already able to complete these assignments, read the Check-Out Activities on the back page. Then, either arrange with your instructor about doing the Check-Out Activities,

or

If you need to complete the lessons in order to be able to do the assignments below, find the two lessons inside this package and go through them in the order in which they are listed.

GOALS

(1) Given a sloper, describe orally how it is made.

(2) Given a bodice sloper and a small piece of paper, draft and cut out a pattern piece for a fitted facing.

(3) Given a bodice sloper and a large piece of paper, make a shoulder dart design by moving the bust-fitting dart to the shoulder by the pivot method.

(4) Given a bodice sloper and a large piece of paper, make a French dart design by closing the waist-fitting dart and the bust-fitting dart using the pivot method.

(5) Given a paper tracing of a bodice sloper, make a French dart design by moving the bust-fitting dart to the shoulder by the slash method.

(6) Given a paper tracing of a bodice sloper, convert the side dart to flare by the pivot method.

(7) Given a paper tracing of a skirt sloper, convert the side dart to flare by the slash method.

(8) Given a paper tracing of a sheath sloper, make a French dart design by closing the bust-fitting dart by the slash method.

(9) Given a paper pattern made from a bodice sloper, label the following items on the pattern: Center front, Fold line, Notches, Grainline, Name of pattern piece.

LEARNING ACTIVITIES

1 ▶ READ Information Sheet I, PREPARATION OF A SLOPER.

2 ▶ VIEW an instructor demonstration on preparing a pattern sloper.

3 ✓ TEST YOUR KNOWLEDGE of information about the Flat-Pattern Method by completing Self-Check I, PREPARING A SLOPER.

4 ▶ VIEW an instructor demonstration on making facings and relocating darts with paper patterns by the Flat-Pattern Method.

5 ✓ TEST YOUR KNOWLEDGE of pattern markings by completing Self-Check II, LABELING PATTERN MARKINGS.

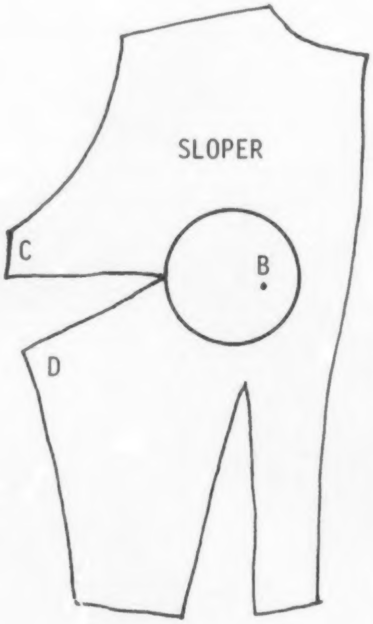
6 ✗ ARRANGE with your instructor to complete this booklet by going through the Check-Out Activities listed on the back page.

▶ Lesson I

Information Sheet I
PREPARATION OF A SLOPER

Although Flat-Pattern Making is not pattern alteration, a knowledge of flat-pattern techniques will contribute to a better understanding of pattern alteration. Flat Pattern also teaches you how to use fitting darts, increasing your ability to do garment fitting. Using flat-pattern techniques, you can restyle old patterns and out-of-date clothing. (You may find that making a pattern takes no more time than complicated alterations of bought patterns that do not fit!) Flat-pattern techniques can also be used to restyle bought patterns to your own taste.

The SLOPER for pattern making is a cardboard copy of a bought basic pattern that has been altered to fit. Slopers have the dart areas and seam allowances cut away. You will have a half-scale sloper to be used for practice work. The sloper you will use is an exact reduction of a size 14 bought basic pattern.

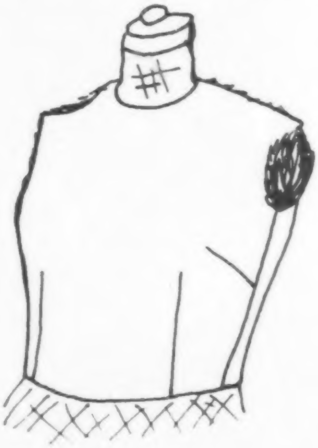


Tracing Wheel Method for Making a Sloper

To make an actual sloper in your size for use later on, you may follow the steps below.

1. Use a bought basic pattern* that has been altered to fit.
2. Press out all of the wrinkles in the tissue paper.
3. Thumbtack the bought pattern (or fasten with paper clips) to a piece of flexible, lightweight cardboard. The cardboard from a suit box could be used.
4. TRACE ALL SEWING LINES and DART LINES with a tracing wheel and tracing paper. Cut out the sloper along tracing wheel marks. Cut away dart areas so it will be possible to trace dart lines when drawing your own pattern.

Before making a sloper from a basic pattern, the basic pattern should be altered to fit and made up as a muslin shell. The muslin shell is a bodice or skirt, sewed in cloth from a basic pattern, that can be tried on by the individual to check the fit. If further alteration is needed for exact fit, pin and thread-mark the muslin shell to indicate necessary changes to be made in the paper basic pattern. Then carefully rip apart the muslin shell and compare the shell sections with the paper basic pattern pieces. Determine what adjustments you must make in the paper basic pattern to make it exactly match the altered muslin shell. For information in making the required pattern alterations, see your instructor and/or a sewing instruction book or magazine.



MUSLIN SHELL

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*The bought basic pattern mentioned in Step 1, above, is the "starting point" for Flat-Pattern designing. It is a simple pattern with five pieces: bodice front, bodice back, skirt front, skirt back, and sleeve.

▶ Instructor Demonstration

Your instructor will demonstrate the steps in preparing a pattern sloper from a bought basic paper pattern.

REFERENCE

Hollen, Norma R., Pattern Making by the Flat Pattern Method, Minneapolis: Burgess Publishing Company, 1975.

EQUIPMENT AND SUPPLIES

Half-scale slopers
Lightweight cardboard (manila file folders or cardboard suit boxes)
Bought basic pattern
Paper clips
Tracing wheel and paper
French curve

✓ Self-Check I

PREPARING A SLOPER

Describe orally (aloud) all steps in the order which you should take in making a pattern sloper from a bought basic paper pattern. Your instructor or another trainee will listen while you tell the steps and check you for accuracy against the answer written below. If the steps you describe do not agree with the answer below, read Information Sheet I again.

Answers:

(1) Use a bought basic pattern that has been altered to fit.
(2) Press out all of the wrinkles in the tissue paper.
(3) Thumbtack the bought pattern (or fasten with paper clips) to a piece of flexible, lightweight cardboard. The cardboard from a suit box could be used.
(4) TRACE ALL SEWING LINES and DART LINES with a tracing wheel. Cut out the sloper by cutting along the tracing wheel marks. Cut away dart areas so it will be possible to trace dart lines when drawing your own pattern.

▶ Lesson II

RESTYLING PATTERNS

Instructor Demonstration

Your instructor will demonstrate for the class making fitted facing patterns and relocating darts with slopers and paper patterns by the Flat-Pattern Method.

The instructor will demonstrate how to:

1. Locate the bust point and bust circle on a bodice sloper.
2. Move the bust-fitting dart to the shoulder by the pivot method.
3. Fold and trim darts so they lie completely flat when the pattern is finished.
4. Close the waist and bust darts to make a combined French dart by the pivot method.
5. Move the bust-fitting dart to the shoulder by the slash method.
6. Prepare an A-line skirt paper pattern from a straight skirt sloper using the slash and pivot methods.
7. Prepare a paper sheath pattern with a French side dart from a sheath sloper and using the slash method.
8. Label markings on prepared paper bodice pattern. Markings include:
   a. Center Fold (C.F.)
   b. Fold line (.:.)
   c. Notches (▲)
   d. Grainline (⟷)
   e. Name of pattern pieces

REFERENCE

Hollen, Norma R., Pattern Making by the Flat Pattern Method. Minneapolis: Burgess Publishing Company, 1975.

EQUIPMENT AND SUPPLIES

Pattern sloper
Bought basic paper bodice pattern
Transparent plastic ruler
Brown paper
Scissors

Ruler
Metal Hem Gauge (6")
Chart, "Pattern Making with Darts"

√ Self-Check II

LABELING PATTERN MARKINGS

On a prepared paper front bodice pattern, add on all seam allowances and label all the items listed below with the correct symbols, including the name of the pattern piece.

If your labels do not agree with the answer below, review the demonstration paper bodice pattern prepared by your instructor.

Answers: Center Front = C.F.; Fold line = ∴; Notches = ▲; Grainline = ⟷; "Bodice Front." All labels should be properly located, as previously demonstrated by your instructor. Seam allowances should be added on all edges except foldline and should measure 5/8-inch.

Instructor's Final Checklist

DRAFTING A PATTERN

Check the trainee's performance in the following elements of drafting a pattern by the Flat-Pattern Method.

Place an X in the appropriate box indicating not accomplished, partially accomplished, or fully accomplished. If, because of special circumstance, the item was impossible to complete, place an X in the "Not Applicable" box.

	Trainee Performance			
	Not Applicable	Not Accomplished	Partially Accomplished	Fully Accomplished
1. The pattern lies flat when completed.	☐	☐	☐	☐
2. Darts that are transferred are accurately located and trimmed.	☐	☐	☐	☐
3. Pattern markings are accurately located and labeled with the correct symbols.	☐	☐	☐	☐

Performance Level: All items must receive a rating of FULLY ACCOMPLISHED (or Not Applicable). If any items are rated NOT ACCOMPLISHED, or PARTIALLY ACCOMPLISHED, the trainee and instructor will discuss this and decide which lessons must be repeated.

✓ CHECK-OUT ACTIVITIES

The statements below explain the activities you must be able to complete in order to finish this package. After you complete the activities, your instructor will rate your performance on each of the activities using the Instructor's Final Checklist, DRAFTING A PATTERN, page 10.

I. Make a shoulder dart design by moving the bust-fitting dart to the shoulder by the pivot method.

II. Make a French dart design by closing the bust-fitting dart and the waist-fitting dart using the pivot method.

III. Make a shoulder dart design by moving the bust-fitting dart to the shoulder by the slash method.

IV. Convert the side dart in a skirt to flare by the pivot method.

V. Convert the side dart in a skirt to flare by the slash method.

VI. In a sheath dress, make a French dart design by closing the bust-fitting dart by the slash method.

Module Topic: A Custom Sewing Business*

Generalization: *The methods and materials used in the alteration and repair of clothing are influenced by the type of fiber, coloring agent, construction, finish, and any damage present. A variety of commercially available business aids and sewing equipment are beneficial; certain items are essential, while many are optional.*

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*This material was pilot tested by research project personnel.

Instructional Objectives:

1. Given reference material, list in writing three types of information necessary for operating a home business and specify information sources.

2. Given a 3 1/2" x 2" wallet-size card, design a business card for a custom sewing service.

3. Given yellow pages from a city telephone directory, list four contacts where business cards may be left to publicize a custom sewing service.

4. Given a listing of alterations, prepare a tentative price list for each type of alteration and state how appropriate charges can be confirmed in a given location.

5. Given a display of commercially available business forms and aids, list four paper forms or organization aids required for operating a custom sewing business and state two benefits of using them.

6. Given examples of completed business forms, accurately prepare an alterations ticket and record completed alterations without error.

7. Given a statement (bill) and a work ticket, fill them out for a sample transaction without error.

8. Given a school notebook, organize it for use as a sales ledger, with an envelope for keeping monthly payment receipts.

9. Given an appointments calendar, write in a reminder for completing a sample work order.

10. Given a small card file, fill out an information card for a fictitious customer in complete detail.

11. Given a garment rack, clothes bag, and covered coat hanger, prepare a display of an area organized for keeping work in progress.

12. Given a display of a custom sewing area, list ten of the essentials for preparing a niche in a home, suitable for a custom sewing business (i.e., industrial or home sewing machine, ironing board and steam iron, cutting surface, press cushions, telephone and message pad, garment rack, customer seating with rack for fashion magazines or pattern catalogs, coat rack, mirror for fittings, desk and perhaps typewriter for paperwork, posture chair, a variety of extra threads and fasteners).

Competencies	Criterion-Referenced Measures
1. Compile information for operating a home custom sewing business.	1. Listing of three types of necessary information and sources for each: A. Insurance B. Social Security payments C. Income tax (See Self-Check I, "Business Procedures", App. E, p. E-8.)
2. Design a business card for a custom sewing service.	1. Design of card to include descriptive name for business, emblem, and sufficient information for ease of contact. (See above.)
3. Compile a list of contacts where business cards could be left for publicizing a custom sewing business.	1. Listing of four contacts and suggested procedures for utilizing each: A. Retail clothing stores B. Dry cleaning establishments C. Launderettes D. Fabric stores (See above.)
4. Prepare an alterations price list.	1. Suitability of price list based on likely time investment and out-of-pocket expenses.
5. Describe and complete samples of required paper forms and organization aids for a custom sewing business.* **	1. Listing of four paper forms and organization aids for a sewing business and two benefits of using them. Completion of provided samples. A. Statement (bill) B. Work ticket C. Sales ledger D. Appointment calendar E. Alterations ticket F. Alteration record

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*V-TECS, Alterationist, pp. 135-136.

**V-TECS, Home Furnishings Worker, pp. 6-7.

Teaching-Learning Strategies	References	Materials, Media, & Other Resources
- Display and discussion of examples of liability insurance policies, Social Security report forms, quarterly and yearly income tax forms.	Brinkley and Aletti, Altering Ready-to-Wear Fashions	insurance policies government forms
- Display an actual business card. Use 3 1/2" x 2" wallet-size pieces of paper to design facsimiles of individual business cards.		transparency of business card business cards made from plain index cards cut into 3 1/2" x 2" pieces
- Assign related reading and brainstorm contacts and suggested procedures.	(same as above)	
- Divide into groups of 2-3 according to categories of alterations for men and women. For selected category, list suggested prices and make suggestions for confirming prices in a given location.	(same as above)	overhead projector sample price list on transparency
- Display statement, work ticket pads, and an appointment calendar available from a variety store. Organize a school notebook for use as a ledger. (Include columns for date, customer identification, product name, labor, materials and supplies, profit, sales tax, total charge.)	V-TECS, Alterationist, pp. 135-136 V-TECS, Home Furnishings Worker, pp. 6-7.	work ticket pad statement pad appointment calendar school notebook

Competencies	Criterion-Referenced Measures
6. Prepare a small card file to record customer information for a custom sewing business.*	1. Sample of card filled out on "customer". Include: A. Fitting problems B. Measurements C. Desired hem lengths
7. Organize an area for hanging work in progress in a custom sewing business.	1. Display which includes garment rack, clothes bag, and covered coat hanger.
8. Prepare a list of ten essential items to include in a niche for a custom sewing business located in a home.	1. Justification of each item on a written list and suggestions for organization.

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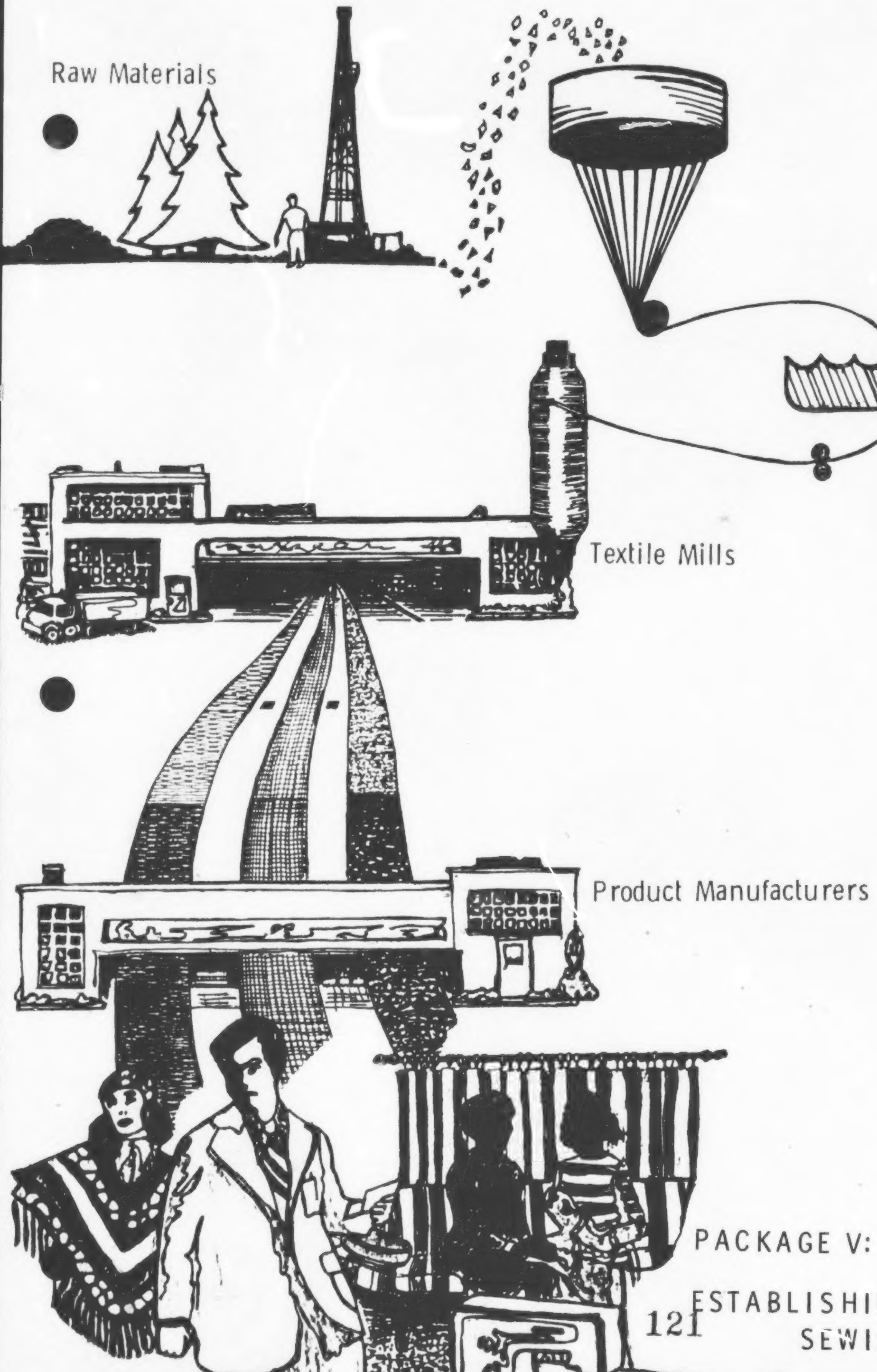
*V-TECS, Alterationist, pp. 135-136.

Teaching-Learning Strategies	References	Materials, Media, & Other Resources
- Display a card file for use in recording customer information for a custom sewing business. Each trainee will interview a partner and fill in pertinent information.	V-TECS, Alterationist, pp. 135-136	small card file box 3" x 5" index cards
- Display of an area organized for hanging work in progress. Explain utility of each item in the display.		garment rack clothes bag covered hanger
- Brainstorm list of essential items and look at illustrations suggesting alternative arrangements. Display selected items.	Brinkley and Aletti, Altering Ready-to-Wear Fashions	press cushion telephone message pad


Raw Materials
Textile Mills
Product Manufacturers

CLOTHING SERVICES

PACKAGE V:

ESTABLISHING A CUSTOM SEWING BUSINESS

ESTABLISHING A CUSTOM SEWING BUSINESS

Procedures and Paperwork for Conducting Business

INTRODUCTION

With the skills learned in clothing class, you can earn good money and self-respect by performing a needed service in any community. A shortage of alterationists exists everywhere, and skilled, businesslike people will find many opportunities to be successful on their own. This occupation depends on sewing skills and the ability to get along with others. Factors such as age, ethnic background or race, and sex are not important. You can do this work at home and set your own pace.

DIRECTIONS

Read the eleven goals listed below. If you think that you are already able to complete these assignments, read the Check-Out Activities on the back page. Then, either arrange with your instructor about doing the Check-Out Activities,

or

If you need to complete the lessons in order to be able to do the assignments below, find the lessons inside this package and go through them in the order in which they are listed.

GOALS

(1) Given reference material, list in writing three types of information necessary for operating a home business and specify information sources.

(2) Given a 3 1/2" x 2" wallet-size card, design a business card for a custom sewing service.

(3) Given yellow pages from a city telephone directory, list four contacts where business cards may be left to publicize a custom sewing service.

(4) Given a listing of alterations, prepare a tentative price list for each type of alteration and state how appropriate charges can be confirmed in a given location.

(5) Given a display of commercially available business forms and aids, list four paper forms or organization aids required for operating a custom sewing business and state two benefits of using them.

(6) Given examples of completed business forms, accurately prepare an alterations ticket and record completed alterations without error.

(7) Given a statement (bill) and a work ticket, fill them out for a sample transaction without error.

(8) Given a school notebook, organize it for use as a sales ledger, with an envelope for keeping monthly payment receipts.

(9) Given an appointments calendar, write in a reminder for completing a sample work order.

(10) Given a small card file, fill out an information card for a fictitious customer in complete detail.

(11) Given a garment rack, clothes bag, and covered coat hanger, prepare a display of an area organized for keeping work in progress.

(12) Given a display of a custom sewing area, list ten of the essentials for preparing a niche in a home, suitable for a custom sewing business (i.e., industrial or home sewing machine, ironing board and steam iron, cutting surface, press cushions, telephone and message pad, customer seating with rack for fashion magazines or pattern catalogs, coatrack, mirror for fittings, desk and perhaps typewriter for paperwork, posture chair, a variety of extra threads and fasteners, garment rack).

LEARNING ACTIVITIES

1 ▶ READ Information Sheet I, PROCEDURES FOR CONDUCTING BUSINESS.

2 ✓ TEST YOUR KNOWLEDGE of procedures for conducting business by completing Self-Check I, BUSINESS PROCEDURES.

3 ▶ VIEW a demonstration by your instructor on paperwork procedures and organization of sewing equipment and supplies.

4 ✓ TEST YOUR KNOWLEDGE of organizing and equipping a work area by completing Student Self-Check II, ORGANIZATION AND EQUIPMENT FOR WORK AREA.

5 ✗ ARRANGE with your instructor to complete this package by going through the Check-Out Activities listed on the back page.

▶ Lesson 1

Information Sheet I
PROCEDURES FOR CONDUCTING BUSINESS

Before opening a business at home, call your local city hall or county courthouse for information about the zoning of your residence. You can also find out if you need to have an occupational license and if your home is in an area which permits running a private business. When you have carried out the required procedures, you may place a sign outside your residence and a phone listing in the yellow pages of the telephone directory. If you are in a strictly residential area that is not zoned semicommercial, you should get a lawyer's opinion on opening a business there to avoid legal difficulties.

Be sure that you have an insurance policy which provides coverage for any liability of a business person to customers. Examples of liability would be for replacement of customers' garments which burned in a fire at your home, or for expensive medical treatment for a customer who fell on your premises. This kind of liability insurance is essential.

Visit the local social security office to request information about the requirement that self-employed business persons make their own social security payments and assume the responsibility for getting credit for future retirement benefits. Of course, you will also need to get a social security card if you do not already have one.

A self-employed person must estimate personal income every three months and send the tax payment to the Internal Revenue Service (IRS). At the end of the year, the yearly tax return must be filed. The local IRS office will provide free information about your responsibilities for your taxes and the forms you must fill out. You may also find it to your advantage to pay a tax consultant, accountant, or lawyer for more information. Sometimes you can get the information from someone in your bank. You need information about the records you have to keep, the expenses that are deductible, and how to pay your estimated tax.

After you have carried out the business procedures described above, you are ready to attract customers for your sewing services. Several techniques are helpful. First, have a supply of business cards printed. Look for a commercial printer in the yellow pages of the telephone directory. If you find more than one, compare prices for the same number of cards. The cost of printing is reasonable, and the printed cards should be well worth it to you. The standard 3 1/2" x 2" wallet card is handiest and has space for the name of your business, your name, address, and telephone number. You may even design a small emblem, such as a sewing machine or scissors and thread, to decorate the card. Check on ordering a rubber stamp with the same information on it. The rubber stamp is convenient for making out alteration tickets, bills, and envelopes to send out invoices for payment due.

The appearance and information provided by your business cards can help sell your services. When you get your cards, polish your appearance and go out to distribute the cards. Remember, your own clothing will advertise your skill to fit and sew for others. Call clothing stores to see if the managers or owners need someone for their alteration or extra help for rush periods. If they will set an appointment, arrange to leave your business card in person. Be prepared with a price list for each type of alteration, and consider schedules of pickup and delivery which might be convenient for them. Keep your discussion businesslike and ask for a

commitment in writing to pay the agreed-on prices. In case a clothing store will not arrange with you to do their work, ask if they would take a supply of your cards to give to their customers when alterations are required.

Fabric store managers or owners may be willing to post your card or provide customers requesting assistance with your cards. You may contact dry cleaners to see if they make repairs to garments. Even if they don't offer an alteration service themselves, ask if they would provide customers needing repairs with your cards.

You can tack your card up on bulletin boards of notices for patrons at the laundromats in your area. Check periodically to see that your card is still posted. Check with managers of apartment houses, motels, and hotels about posting your card on a board there.

It pays to be generous with your cards. Let teachers of sewing classes, home economics teachers, and extension home economists know you provide custom sewing services, in case they get requests for recommendations.

Take or mail your cards to anyone willing to recommend you.

When you do work for people, keep records of your time and your overall expenses such as rent, utilities, supplies, and equipment repair and replacement. Make sure the money you take in covers everything you buy or pay out and also provides a decent hourly wage. Standard price lists for alterations state "& up" after suggested prices. A hem in a lined coat or wedding dress could double the price compared to a regular hem.

To find out usual charges for custom sewing in a certain area, ask how much a specific alteration would cost in a garment you try on in a store. You may even call others who do custom sewing as though you were a prospective customer requesting information on charges. Using the charges for several basic alterations as a guide, make up your complete list and have it typed or neatly printed to display in your home work area. Copy it on a page in your purse-size appointments book for reference when making contacts.

EQUIPMENT AND SUPPLIES

Insurance Policies and Government forms
Business Cards on overhead transparency and actual sample
Plain index cards cut into 3 1/2" x 2" pieces
Overhead projector and transparency of Price List

REFERENCE

Brinkley, J. and A. Aletti, Altering Ready-To-Wear Fashions. Peoria, IL: Charles A. Bennett Co., Inc., 1976.

✓Self-Check I

BUSINESS PROCEDURES

Provide the information requested in each item below. After you have finished, check your answers with those at the bottom of the page. If they do not agree, read Information Sheet I again.

A. List three types of necessary information for operating a home business. List beside each the source for that type of information.

Information	Source
1.	
2.	
3.	

B. Write out a sample of a business card on a wallet-size slip of paper. Be sure you include all essential information.

C. List four contacts where business cards for a custom sewing business could be left.

1.
2.
3.
4.

D. List three basic categories of clothing for men, when used for purposes of making out a suggested price list for custom sewing and alterations.

1.
2.
3.

Answers: (A) 1. Insurance-insurance salesperson. 2. Social security payments-local social security office. 3. Income taxes-local IRS office (also tax consultants, accountants, lawyers). (B) Include name of business, your name, address, phone number (extra credit-draw an emblem). (C) 1. Clothing stores 2. Dry cleaning establishments 3. Laundromats 4. Fabric stores 5. Large residence complexes (any 4 of 5) (D) 1. Slacks 2. Coats/Jackets 3. Shirts

▶ Lesson II
ORGANIZING AND EQUIPPING A CUSTOM SEWING AREA

Instructor Demonstration

The instructor will demonstrate setting up samples of the following:

statements
work ticket pads
alteration ticket
alteration record
appointment calendar
ledger

(Copies will be provided for trainees to fill in for future reference.)

Instructor Demonstration

The instructor will demonstrate setting up a card file for use in recording customer information for a custom sewing business. Each trainee will then take a blank card and interview a partner to record fitting problems, measurements, and desired hem lengths.

Instructor Demonstration

The instructor will demonstrate organizing an area for hanging work in progress. The utility of garment racks, clothes bags, and covered coat hangers will be explained.

Collecting Activity

1. Think of all the equipment and supplies that would be useful in organizing a home work area for custom sewing. The instructor will write on the chalkboard or overhead transparency all suggestions from the class. Even though some items may seem expensive or just "nice-to-have", list all the possible choices.

2. Look at pictures showing different arrangements of equipment and supplies for a home work area for custom sewing. Suggest any ideas you have for improving the arrangement. Sketch ideas on the chalkboard or on overhead transparency (or, the instructor will sketch them).

3. Join with two or three others in a small group. Choose a particular section of a home work area for custom sewing. Select equipment and supplies from the clothing lab that could be arranged in your particular section. Arrange the equipment and supplies for convenience, and display your section of a work area for the others in the class.

EQUIPMENT AND SUPPLIES

Overhead projector
Statement pads
Work Ticket pads
Alteration ticket pads
Alteration record
Appointment calendar
School notebook
Card file and index cards
Garment rack
Clothes bag
Covered coat hanger

REFERENCES

Brinkley, J. and A. Aletti. *Altering Ready-To-Wear Fashions*. Peoria, Illinois: Charles A. Bennett Co., Inc., 1976.

Vocational-Technical Education Consortium of States. *Catalog of Objectives, Criterion-Referenced Measures and Performance Guides for Alterationist*. Montgomery, Alabama: Department of Education, 1976.

Vocational-Technical Education Consortium of States. *Catalog of Objectives for Home Furnishings Worker*. Frankfort, Kentucky: Department of Education, 1976.

✓ Self-Check II

ORGANIZATION AND EQUIPMENT FOR WORK AREA

Provide the information requested in each item below. After you have finished, check your answers with those at the bottom of the page. If they do not agree, refer again to the samples of forms you completed and to the references for this lesson.

A. A female customer has given you a pair of slacks to taper, shorten, and replace the zipper. On the provided samples, complete each of the following forms and records for this work order.

1. Statement (bill)
2. Work or alteration ticket
3. Alteration record
4. Appointment calendar
5. Sales ledger page for this transaction
6. Index card for file box

B. List ten of the essentials for preparing a niche in a home suitable for a custom sewing business.

Answers: (A) The trainee is to include three alterations of the slacks on all forms and records: tapering, hemming, replacing zipper. Be sure all forms and records are completely and accurately filled out.

(B) 1. Industrial or home sewing machine 2. ironing board and steam iron 3. cutting surface 4. press cushions 5. telephone and message pad 6. garment rack 7. customer seating with magazine rack 8. coat rack 9. mirror 10. desk and typewriter 11. posture chair 12. threads and fasteners (any 10).

Instructor's Final Checklist

ESTABLISHING A CUSTOM SEWING BUSINESS

Check the trainee's performance in the following elements of establishing a business.

Place an X in the appropriate box indicating not accomplished, partially accomplished, or fully accomplished. If, because of special circumstance, the item was impossible to complete, place an X in the "Not Applicable" box.

	Trainee Performance			
	Not Applicable	Not Accomplished	Partially Accomplished	Fully Accomplished
1. The trainee fully explained the purposes of each of the following:				
a. Garment rack	☐	☐	☐	☐
b. Covered hanger	☐	☐	☐	☐
c. Garment bag	☐	☐	☐	☐
2. Revised business card included the following:				
a. Full name of person	☐	☐	☐	☐
b. Address	☐	☐	☐	☐
c. Listed services or redid emblem (for extra credit)	☐	☐	☐	☐

Performance Level: All items must receive a rating of FULLY ACCOMPLISHED (or Not Applicable). If any items are rated NOT ACCOMPLISHED, or PARTIALLY ACCOMPLISHED, the trainee and instructor will discuss this and decide which lessons must be repeated.

✓ CHECK-OUT ACTIVITIES

The statements below explain the activities you must be able to complete in order to finish this booklet. After you complete the activities your instructor will rate your performance.

I. Write briefly the purposes of each of the following in custom sewing:

A. Garment Rack

B. Covered hanger

C. Garment Bag

II. Redo the business card below to improve the information provided.

Myra's

CUSTOM SEWING & ALTERATIONS

Blacksburg, Va.

Module Topic: Merchandising Jobs in Clothing Services*

Generalizations: *Many employment opportunities exist in clothing services; several are appropriate for home businesses. Techniques for success in employment interviews can be mastered through role playing.*

Instructional Objectives:

1. Given references including telephone directory yellow pages and newspaper employment ads, list at least five employment opportunities in clothing services and match written descriptions with each job.
2. Given references, list two kinds of clothing services which can be performed in one's own home business.
3. Given related references, list at least two sources of employment leads in clothing services.
4. Given a roleplaying situation, conduct an employment interview and complete a sample application form, to be rated on provided checklists.

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*This material was pilot tested by research project personnel.

Competencies	Criterion-Referenced Measures
1. Identify employment opportunities in clothing services.	1. Written lists of clothing services occupations.
2. Identify procedures for securing and maintaining employment in clothing services.	1. Role playing which depicts interviewing and completing applications for employment, rated on a provided checklist.

JOB INTERVIEW RATING FORM

		Yes	No
How you looked:			
1.	Clothing clean and well-pressed?	☐	☐
2.	Clothing conservative in style and color and appropriate for applying for a job?	☐	☐
3.	Body clean and free from odor?	☐	☐
4.	Hair trimmed, clean, combed?	☐	☐
5.	Shoes clean and polished?	☐	☐
How you acted:			
6.	Greeted interviewer with a smile and called him/her by name?	☐	☐
7.	Stated your name?	☐	☐
8.	Shook interviewer's hand firmly?	☐	☐
9.	Sat only when asked to do so?	☐	☐
10.	Looked interviewer in the eye?	☐	☐
11.	Listened carefully to what interviewer had to say?	☐	☐
12.	Took the time to think questions through before answering?	☐	☐
13.	Emphasized what you could do for the firm rather than what the firm could do for you?	☐	☐
14.	Spoke well of previous employers and associates?	☐	☐
15.	Refrained from arguing with the interviewer?	☐	☐
16.	Showed your desire to work?	☐	☐
17.	Were open to new ideas?	☐	☐
18.	Were courteous and tactful?	☐	☐

		Yes	No
19.	Were enthusiastic about school, work, and life in general?	☐	☐
20.	Asked questions about the job and the company?	☐	☐
21.	Demonstrated your sense of humor (if situation was appropriate)?	☐	☐
22.	Did not exaggerate your qualifications or experience?	☐	☐
23.	Emphasized what you can do, not who you know?	☐	☐
24.	Did not chew gum, smoke, or eat candy?	☐	☐
25.	Stuck to the point and answered questions briefly but completely?	☐	☐
26.	Were on time for the interview?	☐	☐
27.	Thanked the interviewer for his/her time before leaving?	☐	☐
28.	Thanked the receptionist or secretary for being helpful before leaving?	☐	☐

Teaching-Learning Strategies	References	Materials, Media, & Other Resources
- Assign related reading.	Brinkley and Aletti, *Altering Ready-to-Wear Fashions*	
- Small groups discuss and write lists of clothing services occupations.		
- Role play of job interviews.		checklists to rate interviews and application form

Module Topic: Constructing and Installing Window Treatments

Generalization: *Maneuverability and durability of fabric is influenced by fiber content, method of construction and finish. The finished article will give more satisfactory service when the characteristics of the fabric are compatible with intended use. The appearance and durability of window treatments depend upon the accuracy and detail of measuring, construction and installation. Equipment and supplies used by a group necessitates individual responsibility in sharing, use, and care.*

Instructional Objectives:

1. Given illustrations of five different windows, label each as to type.

2. Given illustrations of five types of windows, list two examples of window treatments suitable for each type of window. Prepare a poster with photographs and/or sketches of problem windows and window treatment solutions.

3. Given fabric swatches, list advantages and disadvantages of each for specific window treatments in a notebook.

4. Given diagrams of selected window styles, illustrate the measurements needed for various window treatments by drawing arrows on the window diagrams. Label each drawing with the window treatment for which measurements were indicated.

5. Given a variety of materials, construct a different window treatment for each of three assigned windows to be rated on a provided scorecard.

6. Given three window treatments and appropriate hardware, install the window treatments on assigned windows according to prescribed procedures.

7. Given role play situations concerning interpersonal business relations, depict interactions which would enable one to successfully secure and maintain employment or make a sale and maintain a satisfied client.

8. Given references on storage, adapt a workroom storage area for efficiency of completing work tasks and ease in housekeeping maintenance, as judged by workers who must use the storage area.

Competencies	Criterion-Referenced Measures
1. Assist in selecting window treatments for displays.	1. Labeling of parts of a window and illustrations of five types of windows.
	2. Lists of examples of window treatments for five types of windows.
	3. Posters of window treatments to disguise problem windows (e.g., two windows separated by a narrow wall section may be treated as one with a unifying cornice and draw draperies; a window air conditioner may be shuttered when not in use). Use a checklist to judge the effectiveness of the window treatments.
	4. Preparation of a window treatment display which is judged pleasing by a panel of experts.
2. Analyze fabrics for suitability in window treatments.	1. Lists of advantages and disadvantages of fabric swatches for specific window treatments illustrated by photographs or sketches in a notebook. The following factors should have been analyzed: ease of care, cost, aesthetic values, resilience, weight, drapability, durability, abrasion resistance, colorfastness, and soil resistance.
3. Construct window treatments using appropriate techniques.*	1. Accuracy of placement of arrows and labels on provided diagrams of windows.
	2. Scorecard ratings of construction techniques used on three different types of window treatments.

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* V-TECS, Home Furnishings Worker, pp. 16-61, 65.

Teaching-Learning Strategies	References	Materials, Media, & Other Resources
- Prepare notebooks of window treatment illustrations and appropriate fabric swatches.	current home decoration magazines	ruled notebook
- Prepare posters of window treatment problems and solutions.		poster board felt markers
- In notebook, diagram and label illustrations of window treatments to indicate measurements needed.		
- In small groups construct and install window treatments to be used in a display for judging.[+] A. Construct Roman or Austrian shades. B. Construct trimmed curtains or draperies. C. Construct draperies with jabot and swags, cornice, or valance.	V-TECS, Home Furnishings Worker, pp. 16-61, 77-81	

[+] Teaching-Learning Strategies which are recommended for simulated or cooperative education experiences.

Competencies	Criterion-Referenced Measures
4. Pack a pair of completed draperies for delivery to a customer.* **	1. Draperies which are folded evenly with heavy paper between each fold, with the pleated end of one drapery at one end of the box and the pleated end of the other drapery at the other end of the box, and with the air space packed with crushed paper, then lid placed on box and sealed.
5. Assist in installation of window treatments.**	1. Selection and installation of hardware for three different types of window treatments.
	2. Use of installation procedures recommended for each of two different types of walls and hardware.
6. Work cooperatively with co-workers in following instructions of supervisor.	1. Role play which depicts workers cooperatively following instructions of supervisor to complete an assigned task. Role play situations will be analyzed by participants for positive and negative aspects of relations depicted.
7. Welcome customers using appropriate procedures for showroom etiquette and greeting the public. Handle telephone transactions with clients using appropriate procedures for telephone etiquette.†	1. Role playing which depicts acceptable procedures of etiquette, according to ratings received on provided checklist (see V-TECS Home Furnishings Worker, p. 14).
8. Clean and organize workroom storage areas and make storage accessories.†	1. Review of principles of storage by correctly completing a cross-word puzzle using words related to each principle (e.g., Items should be stored at point of first use.

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*V-TECS, Home Furnishings Worker, p. 56.

**Ibid., p. 77-81.

†Ibid., pp. 12-15, pp. 84-85.

Teaching-Learning Strategies	References	Materials, Media, & Other Resources
	V-TECS *Home Furnishings Worker*	draperies heavy paper box tape for sealing
	(same as above)	
- Role play situations in small groups of following supervisor's instructions on the job.		
- Role play situations of receptionist's duties in showroom and on telephone.	(same as above, p. 13)	mimeographed checklist for role play
- In small groups, rearrange storage areas in work room and construct storage accessories.	(same as above, p. 15)	

Competencies	Criterion-Referenced Measures
	Duplicate inexpensive materials and equipment needed in more than one place. Store items so they are easy to see.).
	2. Role playing which depicts the importance of convenience in storage. For example, a group makes a window treatment in disorganized workroom while others observe and evaluate needed improvements in storage areas.
	3. Group assignments to rearrange various storage areas in the workroom, after which areas are re-evaluated for ease of use and maintenance.
	4. A storage accessory made to be used in the assigned workroom storage area, which is rated for usefulness by workers who must use the storage area (e.g., cloth shoe bags for storing small items on back of door of storage closet, drawstring bags, covered shoe boxes for storing items on shelves, a small set of stair-step shelves).
9. Organize and file sample catalogs.	1. Completeness of list of types of catalogs, including two specific examples for each type.
	2. Sample filing system devised for five examples each of two types of catalogs.

Teaching-Learning Strategies	References	Materials, Media, & Other Resources
(See p. 73.)		

Module Topic: Window Treatment Jobs

Generalization: *Employment opportunities are expanding in drapery-making services, for trained workers with the desired personal qualities. Techniques for success in securing and maintaining employment can be learned through role playing.*

Instructional Objectives:

1. Given the store advertisements and classified sections of two city newspapers, list orally two establishments which provide drapery-making services.
2. After self-analysis, rate on a provided instrument at least ten personal interests and talents which are essential for success in employment.
3. Given job situations, apply appropriate principles of business ethics to seven situations in a class discussion.
4. Role play interviews and list in writing at least two reasons concerning whether each "applicant" should be employed.

Competencies	Criterion-Referenced Measures
1. Help to evaluate own progress in meeting business responsibilities of employment in drapery-making services.	1. Listing of each of the steps involved in drapery making, for which skills may be highly developed to become a specialist on one of these steps (i.e., hemming draperies, working with people as supervisor or drapery work foreman, drapery measurer in clients' homes or businesses, drapery cost estimater, drapery hanger, display sample worker).
	2. Role play which depicts ethical conduct in employment situations relating to each of the following: Absenteeism, tardiness, smoking and eating, alcoholic beverages, misuse of work time, use of abusive language, dress code.
	3. Self-evaluation of personal characteristics relating to employment on a provided instrument which includes appearance, voice, cooperation, work habits, accuracy, courtesy, dependability, health and sanitation, initiative, promptness, self-control.
	4. Role play which depicts how skills such as the following are used by drapery-making employees: knowledge and ability to use elements of design, ability to plan efficient storage and work areas, and knowledge of fabrics.
	5. Role play which depicts an employer interviewing prospective employees in selected occupations. Whether or not the "applicants" should be employed and lists of reasons will be recorded by class members on secret ballots.

Teaching-Learning Strategies	References	Materials, Media, & Other Resources
- In small groups, identify range of drapery-making specialists.		
- In small groups, role play situations of problems on the job.		
- Individuals complete a checklist of employability characteristics.		mimeographed checklist of personal characteristics
- Role play situations of employment interviews.		

Module Topic: The Client's Home

Generalization: *In order to insure proper fit and appearance of a window treatment when installed, measurements of the window must be recorded before fabric is cut. A standard work order form is useful for recording such information for reference by drapery services workers.*

Instructional Objective:

Given a room with at least three windows, demonstrate procedures for taking accurate drapery measurements. Prepare a work order sheet without error for review by client.

Competencies	Performance Evaluation
1. Assist in taking accurate measurements for draperies or curtains.*	1. Accurate results are recorded when measuring three different types of windows for draperies (see V-TECS Home Furnishings Worker, p. 70).
	2. Correct amount of fabric yardage estimated when measurements are tabulated for two types of windows (see V-TECS Home Furnishings Worker, p. 70).
2. Record order on work order sheet.*	1. Role play which depicts review of work order sheet with client (see V-TECS Home Furnishings Worker, pp. 10-11).

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*V-TECS Home Furnishings Worker, pp. 69-70, pp. 10-11.

Teaching-Learning Strategies	References	Materials, Media, & Other Resources
- Measure windows to determine amount of fabric yardage required.[+]	V-TECS, Home Furnishings Worker, pp. 69-70.	measuring tape yardstick V-TECS "Instructor Checklist"
- Record order on work order sheet and role play reviewing order with client.[+]	(same as above, pp. 10-11)	mimeographed work order sheet

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[+] Teaching-Learning Strategies which are recommended for simulated or cooperative education experiences.

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*Little Rock Public Schools. Curriculum Guide: Investigating Career Opportunities. Little Rock, Ark.: Students Metropolitan Vocational-Technical Education Center, September 1972.

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________. A Catalog of Performance Objectives, Criterion-Referenced Measures, and Performance Guides for Home Furnishings Worker. Frankfort, Kentucky: Department of Education, 1976.

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*Indicates uncopyrighted material.

SOURCES OF REFERENCE MATERIALS

American Home Economics Association
2010 Massachusetts Avenue, N.W., Washington, DC 20036

Government Printing Office
Superintendent of Documents, Washington, DC 20402

Man-Made Fiber Producers Association, Inc.
1150 Seventeenth Street, N.W., Washington, DC 20036

The Needle's Eye
Union Special Corporation
404 North Franklin Street, Chicago, IL 60610

Riccar America Company
3184 Pullman Street, Costa Mesa, CA 92626

Union Special Corporation
400 North Franklin Street, Chicago, IL 60610

Union Special Corporation, Technical Training Center
12005 Fourth Street, Huntley, IL 60142